anticipation

CHRISTIAN SOCIAL THOUGHT IN FUTURE PERSPECTIVE

No. 14 August, 1973

REPORT OF AN ECUMENICAL CONFERENCE ON THE SCIENTIFIC, TECHNOLOGICAL AND SOCIAL REVOLUTIONS IN ASIAN PERSPECTIVE

Kuala Lumpur, Malaysia, April 19-23, 1973

			Page
I.	Introductory Note		1
II.	The Environment and Growth Debate in Asian Perspective	*S.L. Parmar*	4
III.	Japan's Environmental Policies and the Impact on Developing Countries in Asia	*Toshio Shishido*	16
IV.	Hope and Social Evolution: T'hien Hsia Ta T'ung and Regnum Dei – A Christian Perspective on the Chinese Experience	*Joseph Needham*	21
V.	Report from Kuala Lumpur		30

These papers are circulated for the information of participants in the ecumenical enquiry on "The Future of Man and Society in a World of Science-Based Technology". Comments are welcome.

Church and Society, World Council of Churches, 150 route de Ferney, 1211 Geneva 20, Switzerland

THE KUALA LUMPUR CONFERENCE ON THE SCIENTIFIC, TECHNOLOGICAL AND SOCIAL REVOLUTIONS IN ASIAN PERSPECTIVE

Introductory Note:

The papers and documents in this number of *Anticipation* represent the findings of the Conference on the Scientific, Technological and Social Revolutions in Asian Perspective, convened April 19-23 at the Fifth Resident College of the University of Malaya, Kuala Lumpur, Malaysia.

This was the second regional meeting organized by the World Council of Churches in relation to the ecumenical inquiry on the Future of Man and Society in a World of Science-Based Technology. Like the previous regional meeting in West Africa [1] and the more recent regional meeting for Europe and North America [2], the Asian Conference was held to obtain national and regional viewpoints on the contribution of science and technology to the future of man and society; and to encourage the churches in the region to give more attention to the issues posed for their faith and witness.

There were forty participants in the Kuala Lumpur meeting, including two from outside Asia. Half of them were physical and natural scientists and technologists, the remainder representing the social sciences, political life, social work, and theological studies.

This was the first ecumenical conference on science, technology and society in Asia. It was organized jointly by the sub-unit on Church and Society and the Commission for the Churches' Participation in Development of the World Council of Churches in cooperation with the East Asia Christian Conference (recently renamed the Christian Conference of Asia), and the Asia Office of the World Student Christian Federation. The chairman was Prof. S.L. Parmar, professeur of economics at the University of Allahabad, India, and chairman of the Working Committee on Church and Society.

The programme included presentations on the following themes:

I. **The Environment and Growth Debate in Asian Perspective.**
Papers by Prof. Parmar and Dr. Toshio Shishido, Vice-President of the Nikko Research Center, Tokyo, Japan.

II. **The Search for a Relevant Technology in Asia.**
Papers by Dr. S.K. Hulbe, Director of the Centre for Studies in Rural Development, Ahmednagar College, India; Prof. M.T. Zen, Associate Professor of Geophysics, Bandung Institute of Technology, Indonesia; and Dr. Jerry C.L. Chang, Vice-President for Development of the Asian Institute of Technology, Bangkok, Thailand.

III. **The Organization and Management of Modern Society as a Dimension of the Technological and Social Revolution.**
Presentations by Mr. Godfrey Gunatilleke, former Additional Permanent Secretary of Planning in Charge of Plan Implementation, Sir Lanka; and Mr. Ron Fujiyoshi, Community Organizer and Urban Industrial Mission Worker in Malaysia and Thailand.

IV. **Religious, Social and Cultural Implications of Asia's Scientific and Technological Development.**
Papers by Dr. Kosuke Koyama, on "Theological Reflections on the Bamboo Room and the Oil Room"; and by Prof. Jin Inn Teoh, Assistant Professor of Psychiatry, Faculty of Medicine, University Hospital, Petaling Jaya, Malaysia, on "The Effect of Rapid Technological Change on the Human Spirit".

[1] See Report of the *West African Conference on Science, Technology and the Future of Man and Society*, Accra, March 1972.

[2] Report and papers of the North American-European Conference on the "Technological Future of the Industrialized Nations and the Quality of Life", Pont-à-Mousson, France, May 27 – June 2, 1973, will be published in *Anticipation* no. 15, available October, 1973.

Following these plenary presentations the Conference divided into two working groups with the following themes and leaders:

Group I – The Future of Asian Society – Economic, Technological and Spiritual Goals.
Chairman: Dr. Philip Shen, Professor of Philosophy and Religion, Chung Chi College, Hong Kong
Secretary: Dr. Anwar Barkat, Principal of Forman Christian College, Lahore, Pakistan.

Group II – Relevant Technology in the Rural and Urban Sectors.
Chairman: Prof. Go Ban Hong, Agronomist, University of Bandung, Indonesia
Secretary: Dr. S.K. Hulbe, Sociologist, Ahmednagar College, India.

The report of these groups is published below. There is unfortunately not space to reproduce all the interesting papers and statements presented to the Conference and the discussion of them. Some, however, are included here and additional papers from this meeting will be presented in future issues of *Anticipation.*

Since we were not able to obtain a contribution from the Peoples' Republic of China on its experience with the use of science and technology we include a paper by Dr. Joseph Needham, a British scientist and authority on the history of science and technology in China. We are grateful to Dr. Needham for permitting us to use his previously unpublished lecture to the Faculty of Divinity of Cambridge University, which has been slightly edited and abbreviated for publication here.

It is difficult to report on the Kuala Lumpur Conference – there were too many complex and ambiguous encounters: between the Christians and persons of other living faiths who shared in the meeting; between the forceful and knowledgeable Indian Communist political leader and Member of Parliament, Dr. K. Mathew Kurien, who is deeply critical of the Christian community from which he himself comes, and other participants equally dedicated to social justice but less certain of the ideological framework within which action might be organized; between the Japanese participants uncertain of the meaning of their own nation's awesome economic growth and many participants from South East Asia who feel, and resent, the tremendous economic power which Japan has over their countries and the way it is exercised; between the flourishing capitalist type prosperity of Malaysia where we met, with its spiritual and social dynamic of technical hope and optimism, and the sense of frustration and even despair of participants from many other countries where droughts, famine, and social and political uncertainty are the dominant social facts. This continuing mood of uncertainty about the ultimate goals and methods of development in Asia may explain the modesty of the *Conclusions* of the report, especially the paragraph where it is stated:

> *"We feel the urgent necessity to search for an Asian theology of man and society, nature and technology as the basis for a new Christian approach to economic and social goals. This is required by the debate about environment, resources, population and the qualitative approach to development. It is also required by the continuing search for clarity about ideology. This study should have at least two dimensions: a) a critical examination of the technological mind and its tendency toward a triumphalist view of the future; b) the criteria which would help define the quality of human life, seen in relation to the harmony of man and nature, and its practical expression in new patterns of human living; c) the movement towards socialist patterns of society and the still unresolved problem of how to relate this to the religious and cultural ethos of a people."*

Perhaps some remarks in the closing session by Mr. Ken Shiozuki, Assistant General Secretary of the Y.M.C.A. of Japan and a former Asian Christian student leader, sum up best the challenge of the Kuala Lumpur meeting:

> *"We missed the Chinese experience, and we recognize that we need their help in facing our problems. Despite the economic growth and progress hoped for in the future most of the Asian societies will be poor societies. The Chinese model offers help on how to acquire a sense of self-respect and dignity despite the knowledge and awareness of our material poverty.*

"The Japanese experience is also important. The Japanese appear to be economically successful but they are also the victims of the "catching up mentality". Japan has paid a terrific price for its rapid technological and economic progress. Japan did not conquer the West; western technology conquered the Japanese soul. The Japanese people are now worried about material things. But the human dilemma remains even if we solve the material problems.

"We realize we need a global and regional perspective to commit ourselves faithfully and realistically to our local situation; yet we must act in the local situation, and because of this we must expect continued sharp confrontation on principles, if we are to be faithful to our different experiences. The consensus we have achieved has therefore its dangers as we try to speak for and with the Asian peoples."

These reservations aside the Kuala Lumpur Conference demonstrates that the Asian peoples will have much to say in the future about the world-wide use and distribution of the earth's resources and the use to which these are put. The papers by Prof. Parmar and others will provide non-Asians with much to think about.

Paul Abrecht

P.S. to our Readers:

Having not received *Anticipation* for some months, some readers have written fearing that their names might have been dropped from our mailing list! Fear not! We apologize for the delay in sending you this number. Our small staff has been preoccupied with a series of meetings and conferences which began with the Kuala Lumpur Conference in April and ended only with the annual meeting of the WCC Central Committee in late August. The result is however a number of fresh insights on "The Future of Man and Society" which we promise to share with you in two or three numbers of *Anticipation* to be published soon.

II

THE ENVIRONMENT AND GROWTH DEBATE IN ASIAN PERSPECTIVE

S.L. Parmar

Department of Economics
Allahabad University, India

"Asian perspective" can be a misleading phrase. It gives an impression of uniformity in conditions where diversity is the rule. However, in discussions about development such a phrase is meaningful because most countries on our continent seem to have accepted a common understanding of development based upon experiences and examples of industrial nations. The realities of our situation and the contradictions that have emerged in our economies by an acceptance of western models, force us to re-examine the pre-suppositions on which our development policies are based. As if to reinforce our introspective inclinations there is a wide-ranging debate about the nature and limits to growth in developed countries.

Growth, self-reliance and social justice have been identified as important ingredients of a development process. But in practice we have, like our western mentors, pursued growth and assumed that the other two would automatically follow. This has not happened. It It is not likely to happen unless we shift our emphasis and consider social justice and self-reliance as causes rather than consequences of growth.

- - - - -

At their present industrial and technological level, developing countries of Asia do not face problems of environmental pollution, ecological imbalance and pressure on non-renewable resources, as have occasioned intensive discussions about limits to growth in developed countries. It is true that the exponential nature of population growth constitutes a serious impediment to development in Asia. But, here again, without minimizing our problem, it should be recognized that the relatively smaller numbers in affluent countries bear the major responsibility for depletion of scarce resources of the world. U.S.A. has less than 6% of the world's population but consumes about 40% of the world's annual output [1]. In the decade 1959-68 the American people used more of the resources of the world than all the people of the earth consumed in all previous history [2]. It is estimated that one American draws on resources that would sustain 50 Indians [3]. Such examples seen in the context of efforts by all developed countries to emulate the material standard of living of U.S.A., show that developing countries despite their larger numbers, are less responsible for the present environmental debacle. That may make the environment and growth debate appear somewhat remote and esoteric to Asia at the present time. There are, however, important reasons why we cannot affort to be unconcerned about it.

One, because we are linked to developed nations through a network of international relations which sooner or later draw us into the orbit of their problems, be it the dollar crisis or cold-war politics. While the benefits of their prosperity do not easily flow towards us, the spill-over of their adversities tends to impose disproportionately heavy burdens on our economies.

Two, because our understanding of development carries such a deep impress of western (including the socialist bloc) concepts and policies, that we cannot remain passive onlookers when their experts are raising doubts about their conceptual framework and policies derived therefrom. Thus, obsession with growth with its GNP-bias, the essentially quantitative view about standard of living, pursuit of materialism as a panacea for human ills, an optimistic view of science and technology, etc., are all under attack. There is now an eager search for quality of life and harmony between man and nature. The growing consciousness that our planet has "finite and irreplacable resources which we are destroying with increasing rapidity" [4], affects the future of the global community, and, therefore, demands our attention.

1 E.J. Mishan, *Economic Growth: The Need for Scepticism,* LLoyds Bank Review, Oct. 1972, page 5.

2 Charles Birch, "Three Facts, Eight Fallacies and Three Axioms About Population and Environment", *Anticipation,* Septembre 1972, page 9.

3 E.F. Schumacher, "Implications of the Limits to Growth Debate", *Anticipation,* December 1972, page 14.

4 E.J. Mishan, "Economic Growth: The Need for Scepticism", page 2.

Three, because of our own perplexity and disillusionment with developmental efforts over the last two decades. There has no doubt been considerable progress in many directions, but alongside of that a number of contradictions have emerged to cast doubts not only on the efficacy of policies, but more significantly upon the values and framework on which these are based. Consequently there is a serious questioning of our acquired pattern of development and its institutional undergirdings. It is part of prudence to anticipate problems and take preventive measures before being overtaken by the crisis of the industrial world.

- - - - -

Contradictions in our Economies

A disturbing feature of two decades of organized developmental efforts in many Asian countries is the emergence of serious contradictions in our economies. Unless these are resolved they are likely to undermine the growth process. By contradictions is meant a situation where positive achievements are counterbalanced by somber negative tendencies which neutralize them. Let me refer to some examples from the Indian economy. One could find parallels in other Asian countries.

- National and per capita incomes have increased (although at a slower rate than envisaged in the Plans), but alongside there has been an increase in the extent and intensity of poverty. According to the Approach paper of the Fifth Five Year Plan, more than 40% of the population is living below the poverty line, estimated at an annual per capita income of Rs 240 (about $33) at 1960-1961 prices, in the urban sector, and Rs 180 (approximately $24) in the rural sector[5]. Official statements confirm the fact that economic inequalities have increased, with the rich growing richer and the poor feeling more deprived in a relative sense even though they may be slightly better off than before.

- We have been commended for our green revolution, but alongside it there is a shortage of foodgrains (despite a doubling of foodgrains production between 1951 and 1971), rising prices of agricultural produce and greater inequality in rural areas which is generating social discontent and unrest[6]. One year of bad monsoon has neutralized the benefits of the green revolution and created near famine conditions in large drought-affected regions.

- Industrial progress is impressive, but there is also an increase in industrial unrest, unemployment and under-employment, prices of manufactures, unused capacity, power shortage, monopoly tendencies, etc. The traditional sector of small scale and cottage industries which not only utilized available resources and skills but is also more employment-generating per unit of invested capital, is in a state of crisis despite government subsidy and encouragement.

- The value of annual exports is nearly 2 1/2 times the 1961 level, with an impressive diversification in composition and direction. But balance of payments deficits continue and debt-servicing will soon eat up one-third of export earnings.

- Educational expansion is impressive and literacy has more than doubled. And yet with 70% of the population still being illiterate we have more persons in that category than twenty years ago.

This is an indicative rather than an exhaustive list. It points to the fact that our pattern of development has not succeeded in attaining some of the important objectives of our plans, such as: + 5% annual rate of growth of GNP; self-sufficiency in foodgrains; control over inflationary tendencies; reduction of unemployment and under-employment; reduction of economic inequalities; less reliance on foreign assistance of capital and technology; institutional changes like land reforms; emergence of a socialist pattern of society, etc.

It is pertinent to look into the reasons for our discomfiture. Are these contradictions caused by technical flaws in planning and administrative deficiencies, or is something fundamentally askew in our understanding of development which gives inordinate importance to aggregative increases in the GNP? Development should first and foremost improve the lot of the poor in a poor country rather than strengthen the hold of a privileged minority, as it seems to have done. Perhaps our problems arise from an unquestioned acceptance of western norms and models and reliance on growth through capital-intensive technology. We must search for a more relevant understanding of development in the light of our situation and recent experiences.

5 *Approach to the Five-Year Plan*, page 3-4.

I venture to submit that such a search is the most crucial element of a process of self-reliance. More important than any other aspect of self-reliance is the authenticity of social thought and policies. Our present disillusionment with concepts and policies borrowed from industrial countries arises from their inadequacy in Asian conditions. In our zeal to pack a century's progress (as understood by today's affluent nations) into a decade, we have neither had the time nor patience to question its basis. Imitation has been considered a virtue; blind imitation a necessity. Once ideas get concretized into plans and policies they develop their own momentum and self-perpetuating power. This has been happening to our economies. Self-reliance is generally understood in a narrow, functional way: as an attempt to restore balance in the foreign exchange budget such that a desired rate of growth and debt-obligations can be financed without external assistance. Consequently the main thrust of self-reliance has been on export promotion and import substitution. This is a useful but limited view. Immensely more important is the self-reliance in ideas, conceptual framework and policies. In addition to our own "development despair", the limits to growth discussion points to serious weaknesses in production, consumption and technological patterns of industrial nations, providing us with added impetus to carefully re-examine much of what we have uncritically acquired from them.

- - - - -

Misgivings about Growth

The simple equation in which growth is equated to development is not relevant to Asian economies. It is possible to achieve growth at the cost of social justice. It is also possible to have a fair rate of growth with increased economic and political subservience to industrial nations. Neither of these two conditions subscribe to our view of development. Therefore prompted by our perplexities we must identify some of the shortcomings in the notion of growth on which our policies have been based. It is suggested that the debate about limits to growth lends urgency to this quest.

Limitations of the GNP-biased view of Growth: There are two basic weaknesses in such an aggregative concept. **One,** it equates a higher average to development but glosses over the important question of distribution. Increases in production can be, and have been appropriated by the pockets of affluence within a developing economy. That increases inequalities and deprives the large needy section of society from the benefits of growth. Economic deprivation and social disadvantage go hand in hand. They promote social unrest, and thus make growth counterproductive. **Two,** it overlooks certain qualitative aspects of the use of resources. All increases in production, whether of luxury goods or basic necessities add to the GNP. But in terms of the needs of our societies priority should be given to the production of essentials. Slum clearance is more important than high-cost housing; increase in production of essential commodities is more important than expansion of luxury goods sector; increase in health and educational facilities more important than night clubs; small, viable projects more important than prestige projects; and so on. These vital distinctions in the application of resources do not receive sufficient weightage in the aggregative GNP concept of development. Consequently increased production may become the cause of increased wastage and misdirection of resources. From the societal standpoint a pattern of production and consumption that gives importance to 'secondaries' over 'primaries' is both non-egalitarian and development-restricting. In certain cases it also manifests a conflict between two aspects of economic policy. Thus we restrict imports of so-called non-essential commodities due to shortage of foreign exchange and encourage import of substitute industries for manufacturing the same goods despite their high foreign exchange component and violation of production priorities. Thereafter we permit advertisements and market expansion techniques imitative of high-consumption economies to artificially boost up the internal demand for these products.

The "catching-up" fallacy: During the first Development Decade there was deep concern about the widening gap between rich and poor nations. A high rate of growth by developing countries was viewed as the lever to initiate an equalization process to narrow the gap. Such expectations have proved illusory. On the basis of available evidence there is little chance of reducing international inequalities in the foreseeable future. During the last twenty years the increase in per capita income of underdeveloped countries as a whole has been less than $1 per year [7]. In 1970 the difference in the average per capita income of developed and developing countries was around $2220. This is likely to increase to $3220 by 1980 [8].

7 Mahbub ul Haq, "The Crisis in Development Strategies", *Anticipation*, no. 12, December 1972, page 3.

8 Ibid., page 4.

According to another projection the present 1:40 ratio between India's per capita income and that of the U.S.A. is likely to be 1:80 by the year 2000. During the same period the India-Japan ratio will move up from 1:12 to 1:70, and the India-West Germany ratio from 1:20 to 1:40[9]. It has been calculated that the increase in the per capita GNP of U.S.A. in one year is equal to the increase that India may be able to manage in 100 years[10]. Admitted that projections are at best rough approximations, the fact remains that these dramatic figures represent acceleration of trends that have been evident over the last two decades.

The question before Asian economies is: why should we accept a yardstick of development (the "catching-up" motivation of growth) which makes us appear poorer the more we progress? We would be deliberately mortgaging our future well-being by subscribing to such a viewpoint. Intellectual self-reliance requires that we relinquish dubious concepts of this kind and evolve our own measuring rod of progress. For that it would be necessary to make our own economies the frame of reference. As long as a country's effort is an improvement on its previous best, as long as quantitative increases in output serve as correctives of maldistribution, and as long as policies of development generate people's participation, it is immaterial whether there is a widening or narrowing of international gaps. We are thus pressed to move towards an understanding of development which will not be in terms of goods only but take into account political, sociological, cultural and ethical factors. To allow economic conditions of industrial nations to determine and measure our performance is a kind of self-imposed neo-colonialism.

Growth fails to promote social justice: An important assumption underlying the GNP-biased view of growth is that increased production *ipso facto* leads to better distribution. Experience however, shows that in many Asian countries growth has increased economic inequalities. This should not be surprising. By itself an increase in production is a purely quantitative phenomenon, while just distribution is related to values and institutions of society. Social justice requires an acceptance of egalitarian values which are concretized in institutions relating to property, power and opportunity. But most developing countries lack institutions through which increased GNP can be transferred to lower income groups. On the contrary existing institutions, with their feudo-colonial make-up tend to favour the better-off sections of society. For instance, the benefits of the green revolution often go to farmers with bigger land holdings and not to small farmers and landless workers who represent our dispossessed section. The process of circular and cumulative causation operates through the existing institutional framework and gives more to those who have more. Naturally then, an increase in GNP leads to concentration of wealth and economic power.

The view that increased output will "filter-down" to the poverty-affected masses is at best *laissez-fairist* and at worst deliberate deception by those who wield power. It is strange that we consider planned action necessary to increase production but assume that without any planning and institutional change an egalitarian social order can be established. Planning the production process and not the distribution process is a contradiction in terms.

The market mechanism on which reliance is often placed to bring about better distribution, favours groups with adequate purchasing power, i.e. higher-income groups. In fact it is their demand that determines what will be produced. Low income groups are by definition lacking purchasing power. Hence their needs are not transformed into effective demand as will influence patterns of production. Even if the forces that increase GNP enhance somewhat the income of the low-income groups, they are still not able to influence production to any significant degree. Under such conditions it is unsound to accept the implied automaticity of the "filter-down" idea.

From our standpoint only such increases in GNP can be indicative of growth as result from a massive increase in production for those below the poverty line. In other words our production priorities must be determined in terms of social needs calculated on the basis of desirable minima. Since our resources are limited it will be necessary to impose a national maximum in consumption patterns in order to release resources for production of essentials. Discussions about welfare and social justice tend to talk only about a desirable minimum but overlook the equally important need for fixing a permissible maximum. Unless the two are kept together we may have dole for the poor but not social justice. Growth of GNP cannot by itself ensure availability of goods and services to the masses. It is necessary to build institutions for this purpose. Higher rates of growth have so far given a fresh lease of life to non-egalitarian institutions which obstruct development.

9 Meadows, Meadows, Randers and Behrens III: *The Limits to Growth*. A Potomac Associates Book, 1972 (based on table on page 43).

10 Mahbub ul Haq, "The Crisis in Development Strategies", page 4.

Growth, People's Participation and the Question of Incentives:

Considerable emphasis is now placed on people's participation in the development process. That would happen if people had sufficient incentive and thus acquired a 'vested interest' in growth. Incentives will have to be in the form of substantial increases in and availability of goods and services that lead to "progressive reduction and eventual elimination of malnutrition, disease, illiteracy, squalor, unemployment and inequalities"[11].

According to the prevalent concept of incentives, special attractions are offered to relatively scarce factors of production to draw them into the production process. On that ground capital and enterprise claim, and receive greater incentive in our economies. But it is becoming increasingly clear that without people's participation capital and enterprise cannot make much headway. Contradictions that bedevil our economies point to a lack of such participation. That means that in our situation people's participation has become a scarce item. Two things must be done. **First,** people's participation should be recognized as an important factor of production; **second,** the masses should be given a greater share of social product.

Production depends upon the use of units of productive power, which are made up by combining varios inputs in a production function. If the incentives which are given to some components act as disincentive to others then a conflict of interest takes place and the efficacy of the production function is reduced. The tendency to select capital and enterprise as key factor in a unit of productive power and give special incentives to them is now proving a disincentive for other factors like labour, small farmers, landless workers, etc. Dissatisfaction and social unrest result and assume both economic and political expressions. Developmental efforts are sometimes brought to a standstill. Increase in GNP together with rising unemployment is proving a serious disincentive to the unemployed because they feel deprived of any share in the larger social product. If we are serious about people's participation it is necessary to work out a concept of incentives that will increase the immediate and prospective share of erstwhile disadvantaged factors and thus give them a stake in growth.

Will not such an understanding of incentives, in which it is linked to social justice, act as a disincentive to capital and enterprise? Supposing it does. Then these factors will have to be disciplined to fit into societal requirements. It is rather strange that those who are so sensitive to the needs of factors of production associated with privileged groups, have remained silent about the deprivation of groups associated with other factors. However, it should not be assumed that policies of social justice will act as disincentive to capital and enterprise. Stoppages and disruption of production caused by lack of people's participation damage the interests of these factors more than a decrease in their immediate share. Two other considerations are important here. **One,** that a concept of incentives leading to a more egalitarian pattern of distribution increases productive capacity and savings potential of beneficiaries. **Two,** that in most of our economies the State is the main provider of capital and enterpreneurial resources.

Most Asian economies have a small saving class and large non-saving class . This results from maldistribution of income and is an obstacle to growth. Measures of social justice should, by drawing the non-saving class into the mainstream of production redress the pattern of distribution, increase the productive capacity of the people and transform them into a saving class. Such measures should be looked upon as investment to make our human resources more efficient. That is how social justice can become a promoter of growth.

The "revolution of rising expectations": There is a tendency to consider the "revolution of rising expectations" as a motivator of effort. This notion is consumption-oriented and seems to imply that desire for more goods is the main spur to greater effort. Personal rather than socially necessary consumption is made the yardstick. If we look at the predevelopment stage of today's industrial economies it is seen that they were placing emphasis on thrift and industry by all groups, specially the owning classes. At the same time domestic and international structures enabled harsh exploitation of labour at home and colonies abroad, to provide investible resources. In such a situation 'rising expectations' was denied to the helpless groups and curbed for the owning classes. The development process was based on sacrifice and effort. In Asian economies where shortage of goods prevails, any motivator of development based upon stimulus to consumption, stands suspect. If we talk at all of rising expectations it should be in terms of efforts, of curtailment of less essential consumption and of a social yardstick for determining essential consumption for the economy as a whole.

- - - - -

11 Mahbub ul Haq, "The Crisis in Development Strategies", Page 6.

Poverty and Zero Rate of Growth

The major environmental problem of Asia consists of poverty and lack of social justice. Affluent societies, now being described as "over-developed economies" may have begun to feel the debilitating effects of actual or potential abundance of goods, but most of our countries experience debilitation and dehumanization caused by insufficiency of goods. Therefore, despite the contradictions that efforts for growth have generated in our economies we cannot give up growth. Seen in the context of paucity of material necessities of life BREAD has a spiritual dimension; it becomes a key element in the process of humanization.

Gandhiji, who strove to spiritualize politics and economic said: "To the poor man God dare not appear except in the form of bread and promise of work" [12]. He was certainly not proclaiming the message of mammon, as is evident from his life and work. He was stressing the importance of eradicating poverty, inequality and exploitation. He believed that "grinding pauperism cannot lead to anything else than moral degradation. Every human being has a right to live and therefore to find the wherewithal to feed himself" [13].

From this angle, prescriptions of zero rate of growth and global equilibrium as given by advocates of limits to growth, are not an option for Asia, nor for the Third World in general. Even on the assumption that rich nations will impose cuts on their consumption and transfer surpluses to poor nations, a zero rate of growth is unacceptable to us. Because, short of a one-world government built on international economic justice such transfers would institutionalize charity and dispossess our countries of their dignity and integrity. On the other hand if a policy of zero rate of growth is accepted under existing politico-economic conditions it would only perpetuate the status quo, leaving developing nations and deprived groups in developed nations to their miserable lot. In that case even if industrial nations succeeded in overcoming problems of pollution, ecological imbalance, etc., the environmental problem of poverty in developing nations will become worse.

However, rejection of zero rate of growth does not mean that Asian countries should pursue the same patterns and policies as today's industrial nations. It is the failure of these patterns that leads to drastic suggestions like global equilibrium and stoppage of further growth. While trying to increase the quantum of goods and services necessary to release people from the poverty trap, we have to interpret development in a new way. The quantitative aspects of development such as concern about GNP would be subordinated to qualitative goals. Consumption cannot be based on unbridled personal desires and manipulations of the market. It should be in terms of social needs and priorities. So also production. The limits to growth discussion is helpful at this point. It challenges affluent nations to replace the prevalent materialistic understanding of standard of living by the more humane concept of quality of life. Thereby it imports moral nuances into economic perspective. This can provide a radical approach to policies, especially for our societies which are still not completely engulfed by values that have dominated decisions in the affluent world. The wholeness of man should not be reduced to 'economic man' – man as a bundle of wants. Freedom from the tyranny of wants requires satisfaction of essential needs but also a curb on the desire to have more and more. We welcome the environment and growth debate as it questions the avid pursuit of a larger basket of goods as a guarantor of human happiness. But if salvation of the affluent is seen in freedom from the dominance of too much, that of the poor nations should be seen in freedom from the dominance of too little. The unequal distribution of politico-economic power in the world appears to be one of the basic reasons for the tyranny of quantity over quality. We must struggle to find a way out of the contemporary human dilemma: the coexistence of too much and too little; of affluence of a few and despoilation of the many. It is here that one can see a convergence of views between rich and poor nations, despite their different points of entry into questions of environment and growth. Their experiences vary but point to the same direction, which is, the need to liberate our understanding of growth from its GNP-biased quantitative moorings and import essentials of social justice and self-reliance into it.

Growth, Welfare and Social Justice: a Digression

The approach suggested in this paper should not be confused with the traditional view of welfare as obtained from western experience. Historically, welfare has been a consequence of growth. Because of this sequence we have half-truths like: 'production first, then distribution', or 'you cannot distribute poverty'. It should not be forgotten that welfare had to be wrested from the powerful by the weak through a process of confrontation and devious forms of

12 *Economic Thought of Mahatma Gandhi.* Edited by Mathur & Mathur.

13 *Ibid.*

class-conflict. The owners of power make concessions reluctantly, prompted by their so-called 'enlightened self-interest', which is an euphemism for continuance of their dominant position giving an inch to hold a yard. Such welfare often grudgingly given and sullenly received may help the rate of growth but falls short of social justice. Unfortunately this is more so in our nations where the hold of feudo-colonial values and institutions is still strong. In western welfare states considerable progress has been made in building up welfare-promoting institutions and thereby weakening, if not eliminating, elements of exploitation. Social justice has to be seen as a determinant of values which will mould our institutional framework. Therefore, it must precede growth and be considered a necessary precondition for growth. That is the only way by which qualitative attributes will civilize quantitative growth.

The limits to growth discussion points to another likely danger in operating on the basis of enlightened self-interest. Given their existing economic pattern and the constant striving for increases in the material standard of living, the self-interest of industrial nations would lead them to appropriate and monopolize the use of non-renewable resources, leaving very little for the attack on poverty in our economies. Pleas for global equilibrium involve a rejection of such self-interest, even though it be for what is considered legitimate economic interests of the developed world. They suggest a shift from enlightened self-interest to social justice on a global scale. That would require a new economic philosophy that does not relate quantum of material goods to human well-being as is the popular notion today, and that considers a more equitable distribution of the world's resources not as a sacrifice by the rich nations but an investment in their well-being.

Asian Introspection on the Dilemma of Growth

Having said that poverty is the environmental reality of Asia it has been suggested that growth is a remedy. The growth process, if patterned on the lines of industrial nations causes problems of pollution and exhaustion of non-renewable resources. That would imply that our efforts to eradicate poverty would lead to further impoverishment. We begin with a situation where our poverty is a limit to growth, we end up with a situation where efforts to remove poverty become a limit to growth. What is to be done? Poverty cannot be tolerated but neither can an attack on poverty that is likely to aggravate it. The solution lies in an understanding of economic progress radically different from what now obtains. From a resource-destroying mode of production we must move to a resource-conserving mode. The present quantitative view of growth and standard of living with their reliance on high-consumption and wasteful production patterns has to be rejected. In order to ensure harmony between economic efforts and nature it is necessary to limit wants, regulate production in terms of social needs, and use a simpler technology that will not require ruthless exploitation of natural resources.

The Asian economic situation is congenial to this outlook. Because of limited resources we emphasize austerity. Of course, under the domination of prevalent ideas of growth austerity is recommended as a temporary inconvenience in order that material affluence may be attained in the near future. Our motive is high-consumption, our goals quantitative. But the dilemma of growth which indicates that pursuit of quantity will lead to further impoverishment should prompt us to accept austerity and limitation of wants not simply as expediency but as a socially desirable objective. Emphasis on social justice and self-reliance would have similar implications. The former means better sharing of what we have. Since we do not have much, an egalitarian distribution pattern is possible only if we accept a simple consumption pattern. Efforts must continue to achieve appreciable increases in production. But since the produce will be used to pull the majority of the population out of its submarginal existence, our social norm has to be a simple consumption pattern. Efforts for self-reliance will have a similar bent. What our economies have in terms of resources and techniques is modest. It can, therefore, only support a modest consumption pattern and a simple technology. The economics of the spinning wheel advocated by Gandhiji is a good example. It operated in terms of available resources of simple skills, unused working hours and locally available raw material. Hand spun cloth, the final product of such resource inputs could only serve a style of consumption based on limitation of wants. The spinning wheel did succeed in breaking the domination of exploitative production structure represented by British textiles. In the process it gave the people dignity with poverty and a sense of "somebodiness". Here was an example of self-reliance becoming the most important economic and political capital for Indian society. Our current disposition towards self-reliance should not look upon it as a technique but as a value which governs and shapes socio-economic structures. The debate on environment and growth highlights the existence of "poverty of affluence". Why should we get enamoured of a new kind of poverty when we have still to overcome the old?

Admitted that goods contribute to human well-being, but the quantum of goods does not by itself ensure happiness. If, as it seems to have done, the concern for quantity engenders greed, acquisition and exploitation, our quest for more goods is an important cause of human misery and despair. Today we have come to recognize the violence and tyranny that exists in social structures. The welfare of the human community is not possible unless the structures of society are divested of these brutalizing components. Pursuit of narrow material ends develops an infatuation for 'things' and debases man in the process. The dilemma of growth gives us a chance to bring sanity into our economic perspectives.

- - - - -

Misgivings about Technology

Devéloping countries in Asia are relying on capital-intensive technology borrowed from developed countries, to promote rapid industrialization. While this has helped to increase production it is also responsible for some of the contradictions in our development process. That is why the relevance of such technology is now being questioned.

Modern technology conforms to the pattern of factor supply in industrial nations. It is capital-using and labour-saving. Our economic conditions are very different. We have scarcity of capital and a relative abundance of labour. The influx of capital-intensive technology distorts our pattern of resource utilization. It uses more of what we lack and less of what we have. A number of problems crop up.

First, such technology fails to relieve the burden of unemployment and under-employment.

Second, it aggravates the existing maldistribution of income by increasing the share and power of capital relatively to labour.

Third, it increases our technological dependence on industrial nations and weakens our efforts for self-reliance. According to the factor endowment in Asian countries a labour-using technology would be more relevant. But once we get ensnared in imported technology there is less possibility of evolving something more suited to our conditions, like Intermediate Technology.

Fourth, in the context of technological self-reliance our basic need is not for technology per se but for a technological revolution which will have our socio-economic realities as its framework. We have to progress from imitation to adaptation to innovation in terms of an indigenous setting.

Fifth, imported technology brings with it elements of the system where it originates, such as high consumption pattern and an inclination towards built-in obsolescence. In our context these represent misdirection and waste of resources.

The debate on environment and growth adds to the list of problems by pointing out that modern technology is responsible for pollution, effluents, and overuse of certain non-renewable resources. These warnings coming as they do at a time when Asian countries are beginning to question the suitability of acquired technology, should strengthen our will for technological self-reliance.

It might be said that industrial nations will, under the pressure of their environmental problems, soon develop a pollution-free technology, hence we should not take an alarmist position. One can think of two reasons why we can not give in to such facile optimism. **One,** that a pollution-free technology is still to come. Even when it is invented the cost in terms of resources may place it beyond the reach of developing nations. Further, any innovations emanating from industrial societies are likely to be even more labour-saving than existing technology. Hence it would be burdensome for us. **Two,** assuming favourable conditions of international technological cooperation, there will still be a considerable time-lag between the discovery of the new technology and its availability to our countries. Industrial societies need important changes in their production, consumption and investment structures in order to accommodate the new technology. That will take time. They also have a heavy backlog of environmental and ecological problems to overcome. That too will take time.

During this interim our economies will continue to receive the familiar contaminated technology which will only extend the area of its pollution-generating activity. According to one line of thinking in developing countries the establishments of branches and auxiliaries by some big western concerns in the Third World is a way of shifting pollution from their countries to ours, at the same time exploiting the cheaper inputs of men and material available in developing countries. No amount of optimism can remove our misgivings about technology. The only responsible and creative approach in this setting is to work for technological self-reliance. In terms of immediate action regarding the ill effects of technology our countries should make the transfer of technology from industrial nations conditional upon prior action to control the pollution it can cause. But the problem of pressure on non-renewable resources will remain.

Relevant Technology and World Peace

Any movement towards relevant technology faces a basic difficulty in our present politico-economic set up. Supposing we opt for a simpler technology and accept a simpler pattern of production and consumption in line with it, can this be implemented?

In most of our countries an increasing degree of emphasis is being placed on defence production and building up of a strong military complex. Much of this production requires the use of sophisticated technology, which has the knack of developing its own momentum. It is then likely to determine the pattern of technology for the whole economy. Its task is made easier because our organized sector already manifests a partiality for modern technology. What chances can there be of moving in the direction of intermediate technology in these conditions? Two possibilities come to mind. **One,** that the world community, specially its big-power members, works for the establishment of peace through disarmament. **Two,** that we move towards a politico-economic system that would allow the co-existence of two basically divergent technologies. The defense sector and part of the organized sector can use capital-intensive technology while the rest of the economy would be geared towards intermediate technology.

Given a certain political framework which can successfully enforce a wide range of controls and regulations, the second alternative can be a practical possibility. We need not shy away from the dualism inherent in a two-technologies social system. Economic dualism has been a characteristic of many Asian countries. It still continues. A small organized sector exists alongside a large traditional sector. Of course, in the past the former has exploited the latter and contributed to under-development and inequality. An important aim of developmental efforts is to end this kind of dualism. Technological dualism can also present similar dangers with the modern sector dominating the one which uses intermediate technology. There would also be the danger that the former would completely overwhelm and absorb the latter. To safeguard against such possibilities it would be necessary to undergird experiments in two-tier technology by necessary political and ideological supports.

The real solution, however, is contained in the first alternative. Peace is an essential pre-condition for socio-economic pluralism, for allowing different economies to try and develop according to their particular ethos and resource pattern. Disarmament would be a concrete evidence that the world is moving into the ways of peace. With so much talk and action regarding international economic cooperation, issues of peace and disarmament have somehow been pushed out of development discussions. This is unfortunate. Perhaps our deep concern for self-reliance and the realization that international peace is an essential pre-requisite, will again make disarmament and anti-militarism integral parts of development strategy.

So long as the world has to rely on a balance of terror to maintain peace, national decisions will continue to be dominated and vitiated by defense considerations. A number of Asian countries are as much embroiled in a mini armaments race as are the big powers in its more awesome variety. Modern weaponry may have reduced chances of a global war but it seems to encourage smaller wars in the Third World. Perhaps the big powers are confronting each other by proxy through conflicts between developing nations. If that is so it shows the pathetic state of our subservience. If we really mean business by our affirmations of self-reliance, we have to keep in mind the political ramifications of economic decisions.

Intermediate technology can maintain harmony between man and nature. In that case it will not exploit nature as advanced technology is doing. It could therefore, be considered non-violent in character. Precisely for that reason it can develop and flourish in a climate of peace. The limits to growth discussion is of great significance in this context. It exposes the rapacious nature of technology. The suggestion of zero rate of growth and global equilibrium, if put into practice, would reduce the exploitative attributes of technology and divest it of its inherent violence. This would be possible only by accepting international justice as the basis of political and economic policies. Our misgivings with technology prompt us to embark on a different technological track. A new set of values and institutions will be necessary for the human community if developing countries are to succeed in this venture through international cooperation.

- - - - -

Misgivings about Trade

Both because of experiences of their colonial past as well as the present structure of world trade, many Asian countries harbour serious misgivings about trade. Historically, trade served as an "engine of growth" for today's industrial nations but as an instrument of deprivation for the underdeveloped. This does not seem to have changed. The theory of comparative costs and all its variants emphasized a mutuality of gains from trade and a process of international equalization of incomes. Neither of these has happened. On the contrary trade has increased international inequalities and conferred greater gains on the more powerful. Even in this era of development through international cooperation, commodity prices, terms of trade and commercial policy have generally been adverse to developing nations. Policies of trade liberalization seem to apply more to trade relations between developed countries (e.g. Kennedy Round, EEC trade relations, etc.) than between them and developing nations.

As our economies progress in their developmental efforts a new pattern of international division of labour should emerge. But the unwillingness of developed nations to undergo requisite structural changes hampers this. On the other hand technological advancement of developed nations has a two-fold adverse effect on our exports. It reduces the quantum of imported raw material required per unit of output, and it produces synthetics and substitutes that weaken the demand for some of our traditional exports.

Under the prevailing pattern of trade our economies are burdened with large deficits that force us to take loans and other kinds of external assistance. The growing burden of debt-repayment represents one of our current hardships. Still more difficult is our inability to generate adequate export surpluses to repay debts, due to restrictive trade policies of creditor nations. Export promotion by developing countries is a form of forced savings. First, we have to squeeze surpluses from an economy of scarcity by imposing curbs on consumption. Then we have to subsidize these exports to make them competitive in the world market. It becomes a case of poorer nations contributing to the rich.

A popular myth about trade has been that factors of production do not move between countries; that the movement of goods becomes a substitute for the movement of factors. Perhaps if this really happened then trade would be beneficial to the weaker partner also. But from the time of colonial domination capital and technique have moved from the dominant nations into the weaker ones to foist on the latter a pattern of specialization and trade that would serve the interests of the former. Subsequently labour and raw materials were drained out of developing nations to serve as inputs for the dominant countries. This double movement of factors may appear to be compensatory but has been in reality a mechanism of economic exploitation of the weak. Foreign trade led to a drain of resources from the developing world. Despite many changes in details the basic nature of world trade remains non-egalitarian. That is why our countries have misgivings about it. In the context of such a pattern of trade the limits to growth discussion provides important insights.

Apprehensions about non-renewable resources underline the need to apply a qualitative yardstick to international transactions. Exports of raw materials, mineral resources and other factors of production represent a serious drain if there is danger of their exhaustion or serious depletion. Under the pressure of adverse balance of payments Asian economies are following policies of export promotion. Anything which can find a market and fetch a satisfactory price is being added to our export list. We must be careful lest in our anxiety to increase export earnings we denude our economies of scarce resources and are unable to have enough when our production reaches a level where we will require

these inputs. Assuming that when these resources are exhausted industrial nations succeed in developing substitutes for them, that is not likely to help us much. **Firstly,** these substitutes will be expensive; **secondly,** the economies producing them would need them for their own use; **thirdly,** their import is likely to strain our balance of payments and increase our indebtedness; and **fourthly,** their use would increase our reliance on the technology that produces such substitutes.

International prices of non-renewable resources are likely to rise as reduced supplies cope with increased demand. In the context of our preoccupation with export promotion this is likely to increase the outflow of such resources from our economies. That, however, would be a temporary gain leading to long-term deprivation. Our export decisions should, therefore, not be based only on narrow quantitative considerations of foreign exchange earnings, aggregate value of exports and short-term improvements in terms of trade, but also on qualitative considerations of the nature of what is exported, whether commodity or factor of production, whether renewable or non-renewable resources.

A fundamental question has also to be raised about the prevalent trade policy of export promotion and import substitution. Its objective is self-reliance in the foreign exchange sector. But deficits in external accounts result from our imitation of models and programmes of development of industrial societies. In other words it is the lack of self-reliance in our understanding and approach to development that generates chronic deficits in balance of payments. Even if trade policy restored equilibrium in payments we cannot conclude that self-reliance has been achieved because our patterns continue to be imitative and will throw up new and more intractable contradictions with the passage of time. We should, therefore, not call our trade policy one of self-reliance when it is necessitated because we have not been self-reliant in a more basic sense.

- - - - -

Some Contradictions of International Economic Relations

Over the last two decades international economic relations have been beset by contradictions. We are familiar with the disillusionment with the first Development Decade. It is reflected in aid-weariness in donor nations and aid-cynicism in recipients. Both sides have genuine reasons for some degree of dissatisfaction with each other. But the real cause of the trouble lies elsewhere. The whole approach to foreign aid has been quantitative, placing emphasis on the quantum of capital and technology. The plea for 1% GNP of rich nations as aid to insure 5% annual rate of growth in developing countries is a clear instance of the quantitative approach. While resources are important for development, radical alterations in the institutional framework are much more so. A developing country requiring external assistance is in an import surplus stage. Inflow of resources from donor nations helps to finance such surplus. But they are expected to increase production and export capacity of recipients in a manner that in course of time it will be able to have an export surplus to meet its debt obligations and finance its growing import bill. This calls for a change in the existing pattern of international division of labour, terms of trade, and trade policies of donor nations. Such vital changes have not been taking place.

As UNCTAD II and UNCTAD III have shown there is a lack of political will on the part of developed nations to initiate basic changes in their relationships with the developing economies. Consequently what is described as international cooperation tends to increase the domination of the strong and the dependence of the weak. Just as the GNP-biased approach to growth has increased economic inequalities within our societies, similarly the quantitative approach to international cooperation has accentuated inequalities.

The debate on environment and growth suggests that economic patterns in industrial countries promote exploitation of under-developed economies and the non-renewable resources of the world. That is made possible by the unequal distribution of political and economic power between nations. Unless we move towards international economic justice international cooperation will not be a partnership but a form of domination of our economies.

Therefore, whether one looks at trade, aid, investment or technological assistance, these represent, certainly in their present form, obstacles to self-reliance and social justice. It may now be necessary for our economies to become somewhat more inward looking, moreso because the mechanism of international economic relationships leads to drain of our resources and injection of harmful elements of production, consumption and technology from affluent nations.

- - - - -

Asian countries have reasons to be dissatisfied with the pattern of development we have been following, a pattern acquired from industrial societies. At the same time, as the debate on environment and growth shows, industrial societies have also begun to question the suitability of these patterns. There is, therefore, a need to replace what exists with something creative.

The merit of suggestions such as zero rate of growth and global equilibrium is two-fold. **First,** the emphasis on a global approach to the problems of our era; **second,** a stress on better sharing rather than increased production. Both lines introduce ethical considerations in economic decisions. A global approach implies considerations of the weak by the strong; in fact, of giving primacy to the interests of weaker sections. This would be as valid internationally as nationally. Its expression would be social justice in the domestic economy and international economic justice in the world economy. Stress on better sharing also gives priority to those who are in greater need. Thus both national economic planning and international cooperation must be based on justice.

This leads to an important precondition. Concern for others would suggest non-concentration of resources in the hands of the strong. Once this is accepted the industrial nations will have to give up their present hold on the world's resources, some of which are being over-used to the point of possible exhaustion. The logic of this will be to discard present patterns of high consumption. Thereafter, the existing wasteful pattern of production can be altered. Once sharing takes the place of acquisition it removes elements of domination and violence from socio-economic structures. It would also civilize technology to the point where it gives back to nature more than what it takes from nature.

At the present stage of our discussions it would be difficult to spell out the full implications of an ethico-economic approach. But, for Asian economies, the realities of their situation suggest development along lines where sharing, non-acquisition, simple pattern of consumption and production and primacy of social over individual interests become possible. Our societies are traditional. In such societies the hold of community and clan is always strong. We are now required to move from feudal concepts of community loyalty to a modern concept of seeing the whole nation as the new community and through that seeing ourselves as parts of the human community. The challenge of self-reliance of ideas and policies is perhaps the main challenge that the debate on environment and growth presents to our countries. What is more important, it is only through such self-reliance that international inter-dependence can be assured.

III

JAPAN'S ENVIRONMENTAL POLICIES AND THEIR IMPACT ON DEVELOPING COUNTRIES IN ASIA

Toshio Shishido

Director General,
Nikko Research Center, Tokyo

INDUSTRIALIZATION AND POLLUTION

In his interesting article in *Anticipation*, Sept. 1972, Professor Pyong Choon Hahm wrote that while newly developing countries know that industrialization may well mean pollution, they still want to become industrialized. He said, moreover, that he thought their attitude reflects very real needs.

No one will deny that industrialization is necessary for newly developing countries if they are to succeed in ridding themselves of poverty. Basic economic precepts teach us that if a country is to raise its per capita income it must increase its non-agricultural labor population.

But while environmental pollution may possibly accompany industrialization, I do not think it is an inevitable accompaniment. In my own country, high-level economic growth and industrialization have created serious pollution problems, yet this does not mean that we erred in pursuing the course we did. Rather, I think our error was that we simply did not attend sufficiently to our environment. We were in a hurry to industrialize, and in our rush we completely underestimated what might happen to our surroundings. Our experience actually makes me believe all the more firmly that there is no reason why a country cannot have industrialization without pollution. The basic problem is one of priorities as reflected in official policies. In short, less-advanced nations can achieve "clean" industrialization if they make the effort needed to formulate wise policies to direct it.

WHAT CAN JAPAN DO?

Before explanation of Japanese environmental policies, I would like to describe the economic situation of Japan as a factor of industrialization of Asian nations. Japan's economy has grown continuously in the past twenty-five years, with its GNP averaging a spectacular 10 per cent annual growth in real terms. Our GNP reached the $300 billion mark in 1972, placing Japan third among the world's major economic powers, behind only the United States and the Soviet Union. Supporting a population of 104 million people at home, and with exports totaling $30 billion, Japan's economy now equals that of the advanced West European countries in terms of production capabilities and in its ability to contribute to the development of less-advanced countries.

During the last decade, our imports increased about 15.5 per cent annually, almost twice the world average. Our share of the world's export markets, meanwhile, grew from 2.8 per cent in 1957 to 7.1 per cent in 1972. Total Japanese assistance to developing nations increased from $117 million in 1957 to about $2,000 million in 1972, making Japan second only to the United States in the amount of economic aid given to other countries.

In very recent years – the last two years, in particular – Japan's economy has undergone great change. The yen was revalued upward by 17 per cent in December 1971, and external pressures increased beginning in 1973 for a second revaluation. By the end of 1972, our foreign reserves reached $18.8 billion, and we now face a dilemma of how best to utilize our surplus. In a word, we are experiencing the agonies of the rich.

Some quarters have made proposals regarding ways to reduce our dollar holdings. One proposal calls for granting extensive economic assistance to developing countries. Japan's foreign aid programs in the past were somewhat limited, largely because of our unfavorable balance of payments. However, in coming ten years, granting that our domestic economy remains stable, we have the opportunity to offset our trade surplus by exporting large amounts of capital, just as other advanced countries do. *(see Fig. 1).*

Fig. 1 **Trade Forecast of Japan and S.E. Asia**
(mil. $ FOB)

		1970	1980
South East Asian countries total	Export	14,190	36,397
	Import	18,810	47,092
Trade between Japan and S.E.A.	Export	2,370	10,281
	Import	4,870	19,063
Japan's share in total export from S.E.A.		16.7%	28.2%
Japan's share in total import to S.E.A.		25.9%	40.5%

Note: Estimations by Japan Economic Centre. 1972.

a. Structural efficiency and additional imports

Following the yen's revaluation in December 1971, the need for a more efficient industrial structure became the subject of much discussion in Japan. In a very real sense, the yen's revaluation was not merely a step toward adjusting our international balance of payments. It was expected in the long run to help rid the home economy of inefficient industries, as seen from the viewpoint of the international division of industry.

Japan's industrial structure covers the full spectrum of industries. It is a structure inherited from the days when we struggled to accumulate foreign currency. Our government's approach was to promote domestic industry in all fields and to restrict imports almost entirely to raw materials. We avoided any horizontal division of industry, thus running counter to the general world trend toward an international division of labor.

As our balance of trade payments improved, however, and our surplus of foreign reserves grew, we were gradually forced into a position where we had to import more goods from industrially advanced countries. Moreover, to answer the demand from developing countries for "More trade, than aid," it is now necessary that Japan also import agricultural and industrial products from them.

b. Natural resources and foreign aid

Japan is not only the world's third greatest economic power but also the largest importer of raw materials. Our country's future economic development will continue to depend on raw material imports and it is vital that we secure dependable sources to fill our needs. But extending economic aid to developing countries primarily to obtain raw materials for our domestic economy can easily incite nationalistic sentiments and cries of economic exploitation. At the same time, less-advanced nations should recognize that their economic growth depends in large part on developing their natural resources. And it is in that area that Japan can play an important role by providing capital and technical assistance to help a country to develop the latent wealth it possesses in natural resources. That assistance, however, must include turning over to the host country the oil refineries, ore smeltering facilities, and other industrial facilities that are built.

c. Industrial dispersion

Because of its rapid and high rate of growth, Japan's economy has today become excessively high in density. One consequence is that pollution problems in my country rank among the most serious in the world. Another consequence is that for further economic development it is not feasible to apply past concepts regarding the location of industrial facilities. Since there are fewer appropriate sites remaining for large-scale industrial projects in Japan, the search for new industrial locations has to be conducted on an international level. Naturally, in introducing pollution-prone industries to a developing country the utmost attention must be paid to preventing the disruption of that country's natural environment. Industrialization is fine, but a country's air, its water, and its land should all be protected. That refers back to the "clean" industrialization I mentioned earlier.

Dispersion of industry away from home has become essential for Japan, both from her position as an industrially advanced nation and from a need to ease the difficulties that hamper domestic economic growth. Those difficulties relate to the natural limitations Japan suffers in being a small country with much mountainous land that is not usable for either agriculture or industry.

In view of the above, I think it is necessary that my country make serious efforts to follow the world trend toward a horizontal division of industry. In particular, Japan should try to relocate in less-advanced countries the industrial facilities that are used for processing natural resources. This will benefit Japan, of course, but will benefit developing countries even more. For example, Japan produced 100 million tons of crude steel in 1972, 20 per cent of the world's total production, and exported 27 million tons. Forecasts for 1985 are for a total world demand of about 1,000 million tons. *(see Fig. 2).* If Japan were to account for 20 per cent of that demand it would have to produce twice as much steel as at present, which hardly seems desirable in the light of environmental problems we already face in my country today. My suggestion is that we gradually reduce the growth of our steel production so that by 1985 we are no longer exporting steel. The 50 million tons that Japan is forecasted to be exporting in 1985 can be provided instead by countries in Southeast Asia. I hope my country's future economic policies will be formulated along lines that will make that possible.

Fig. 2 **The Outlook of Japanese Steel Industry**

(Crude Steel, Million tons)

	1970		1977		1985	
	Production	Export or Import	Production	Export or Import	Production	Export or Import
Japan	97	23	147	33	200	42
Asia (except Japan)	25	-11	57	-19	102	-26
Workd Total	597	0	841	0	1,200	0

Note: Preliminary claculation by MITI. 1973.

ENVIRONMENTAL POLICIES AND THEIR EFFECTS

Pollution problems are sometimes more serious in Japan than elsewhere in the world. This relates to Japan being a small country with highly concentrated industrial areas. An example of Japan's industrial requirements is our energy consumption, approximately sixty times the world average per unit area. To help cope with our pollution problems, the government now would like to adopt certain fundamental policies.

1. To reduce economic growth from the current 11 per cent to 7 per cent in the 1980s.

2 To place tough controls on industrial facilities that discharge pollutants, aiming to reduce pollutants from the present level to about 10 per cent of total emissions discharged from production process over the next ten years.

3 To urge a qualitative change in the industrial structure, with emphasis on promoting industries that depend on information and sophisticated technology.

4 To promote the dispersal of industry away from urban centers. In particular, allowing no more industry into cities like Tokyo and Osaka.

Fig. 3 and the following charts (chart 1–3) show forecasts that tell us what amount of pollution Japan can expect in the future and what we must do to reduce it. If we would take a same pattern of past economic growth, (case 0) we could not afford to live in future. However, government regulation and a moderate growth rate would reduce considerably the environmental pollution in the next ten years. (case 1)

And if we are to succeed in severe control for future industrialization and reconstruction of industrial estate, (case 2), we will be able to reduce the industrial pollution under the level of 1960's. At the same time, our forecast model shows that in the next 5 years Japanese industry will have to invest 62 billion US$ or nearly 5% of Total GNP on anti-pollution equipment and devices.

Fig. 3 **The Cases of Long-Term Pollution Problem**

	Growth rate (%)		Total amounts of Investment for pollution control (bill. US$)		Investment for pollution control/GNP		Index of pollution
Case No.	**1972-1977**	**1972-1985**	**up to 1977**	**up to 1985**			**in 1985**
0	8.6	7.4	0	0	0	0	3.0
1	8.8	8.2	29	182	2.2	3.2	1.6
2	10.7	8.9	62	400	4.7	4.9	0.9

CONCLUSION

I should like to propose the following.

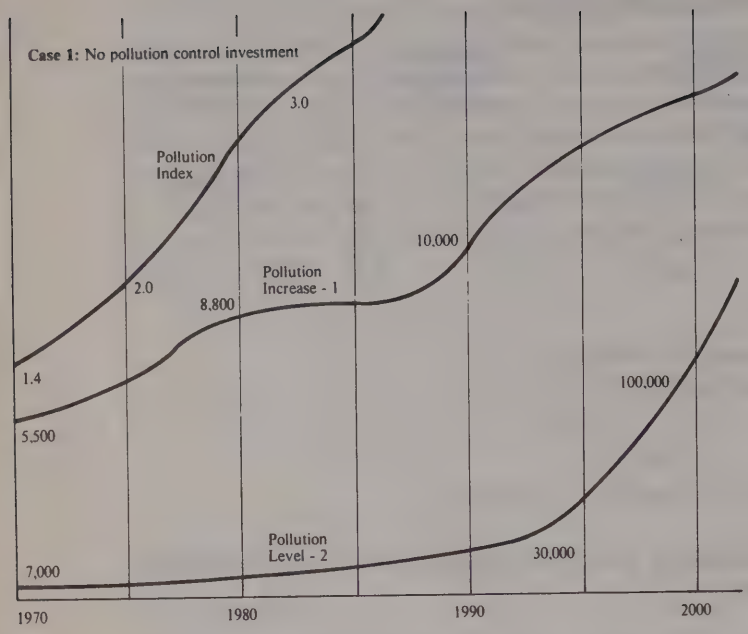
For the economic development of the developing countries in Asia, "Clean Industrialization" is important consideration for the both developed and developing countries.

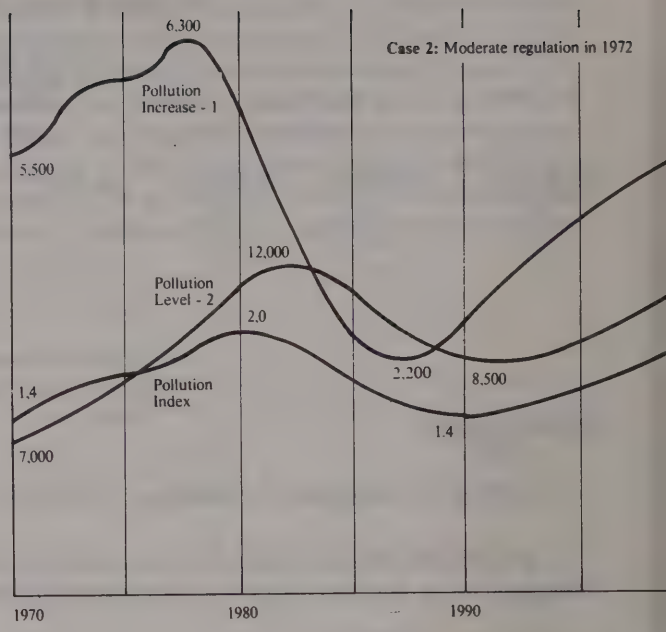
From this view point, it is necessary to draft "Investment Charter for World Enterprises" internationally agreed upon. We will have to think ways of making the world enterprises function within such a framework in which the operation of industrial production facilities being set up in developing countries should be under strict pollution control.

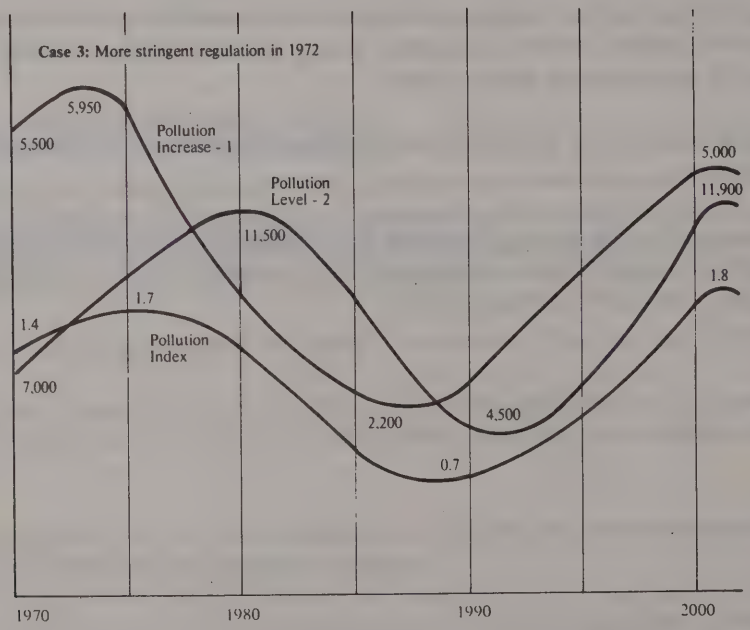
The present status of the Japanese foreign aid policy and direct investment to the developing countries, is rather behind her actual economic strength. However, it is clearly evident that Japan must participate in a positive way in the industrial development of the developing nations in Asia.

We should have deep concern for the social impact of industrialization and the by-products of industrialization, like environmental pollution.

"Clean industrialization" might be more expensive than standardized establishment of industries. To maintain the international competitive power of the developing countries, it is necessary to have an agreement on an international regulatory system for environmental pollution control.


Case 1: No pollution control investment
3.0
Pollution
Index
2.0
8,800
Pollution
Increase - 1
10,000
1.4
5,500
100,000
Pollution
Level - 2
7,000
30,000
1970
1980
1990
2000


Case 2: Moderate regulation in 1972
6,300
Pollution
Increase - 1
5,500
12,000
Pollution
Level - 2
2.0
2,200
8,500
1.4
Pollution
Index
1.4
7,000
1970
1980
1990


Case 3: More stringent regulation in 1972
5,950
5,500
Pollution
Increase - 1
5,000
11,900
Pollution
Level - 2
11,500
1.8
1.7
1.4
Pollution
Index
7,000
2,200
4,500
0.7
1970
1980
1990
2000

IV

HOPE AND SOCIAL EVOLUTION: T'HIEN HSIA TA T'UNG[1] AND REGNUM DEI

A CHRISTIAN PERSPECTIVE ON THE CHINESE EXPERIENCE

Joseph Needham[2]

We can't think today as the early Christians thought, or the Gnostics, who lived in a world so exceedingly different from our own. The Graeco-Roman world and its world-picture have gone for ever; and other world-pictures as well – such as that of the Middle Ages, shattered by the Copernican revolution. It's no good trying to hold what one might call a fundamentally antiquated faith. What we need is a faith in tune with all the most important fundamental things that we know about the solar system and about the universe that we live in.

Basic to our knowledge of the universe is the conception of "integrative levels". I used to call this "Successions in time and envelopes in space". If you take the envelopes first, it's obvious that the different levels of organization occur one within the other; ultimate particles, the proton and the electron, build up atoms, and atoms build up molecules, and molecules build up large colloidal particles and cell-constituents and paracrystalline phases and organelles, and they in their turn are organized into living cells. Above that level the cells form tissues and organs, and the latter combine into the functioning living body, and the bodies of men (and the bodies of some animals as well in their way) form social communities. As the central nervous system becomes more complex, mental phenomena emerge, until the incredibly elaborate psychological life of man is attained. The remarkable thing about our world is that each of these envelopes seems to be analogous to a past phase in the history of its development. There were inorganic molecules before there were living cells, and the origin of these depended upon the right conditions of the environment for bringing out the potentialities of the first protein molecules; and there were living cells before there were any social associations. So the fundamental thread that seems to run through the entire history of our world is a continuous rise in the level of organization; and that presumably has also been going on in other galaxies, other solar systems, where the conditions are just right.

The Social Significance of Evolutionary Change

There is an important corollary to all this, which Christians have got to face up to: that any static or too conservative view of the state of human institutions is quite impossible. If living organization has such triumphs behind it as the the first invention of the cell-membrane, the kidney-tubule, and the notochord, the flint knife, or the plough, the art of language and the skill of ships, it is not likely that the election of Mr. Nixon is going to have any durable importance, or that human society will always remain separated into national States with national sovereignties above the moral law and social classes with different privileges and manners.

I mentioned just now that it is possible that these or similar evolutionary changes have occurred in other worlds, as various poets like Francis Meynell at the end of the last century have realised. These worlds may be rather small in number among the galaxies, or they may be more, but they have to be worlds which are suitable for the existence of complicated carbon compounds in the colloidal state. A conception of biological evolution in the course of which the

1 T'ien Hsia Ta T'ung ( ): literally – "under heaven great harmony". The meaning is world-wide universal harmony. A similar phrase "T'ien Hsia I Chia" ( ) means under heaven one family and has been interpreted as "All men are brothers". T'ien Hsia Ta T'ung is broader including the harmony not only of human beings but of the whole of creation.

2 Dr. Needham is Master of Gonville and Caius College and Reader in Biochemistry, Cambridge University. Since the Second World War Dr. Needham has been a frequent visitor to China and is perhaps best known for his multi-volume history of *Science and Civilization in China*. The paper published here was given as a lecture to the Faculty of Divinity, Cambridge, November 8, 1972.

many-celled organisms developed from the single-celled ones, perhaps something like the autotrophic bacteria of the present day, is also essential. Then of course you find that the wholes on the lower levels become parts on the new – like protein crystals in cells, or cells in metazon organisms. Archaeologists and anthropologists have familiarized us with the idea of evolutionary development in sociology from the earliest beginnings of social relationships between men to the conception of the cooperative commonwealth of all humanity which we can say is in our time dawning on the world.

There follows from this fundamentally developmental attitude, a conclusion which many otherwise clear-minded people have been highly reluctant to see, namely that we have no reason to suppose that our present condition of civilization is the last masterpiece of universal organization, the highest form of order of which Nature is capable. I believe there are many grounds for seeing in collectivism, of the kind of which we could approve, a form of organization as much above the outlook of middle-class nations as their form of order is superior to that of primitive tribes. I think it would hardly be going too far to say that, so clear is the continuity between inorganic, biological and social order, the transition from economic individualism to the common ownership by humanity of the world's productive resources will be a step similar in nature to the transition from lifeless proteins to the living cell, or from primitive savagery to the first community. From this point of view, the future state of social justice is seen not as a fantastic Utopia, nor a desperate hope, but as a form of organization with the full force and authority of evolution behind it.

Of course, you have to make a certain revaluation of the idea of progress. No doubt there has been in it a great deal of naive Victorian optimism, and other faults of perspective. But if you think of it as scientists do, who plot things on graphs, you know that there are many points that fall below the line as well as others which rise above it; you can find the trend in all those readings and draw the line through them, and in this case it certainly is an ascending line. People like to bring up phenomena such as parasitism and degeneration, and say, as they did when I was young, that one should after all consider also the hookworm's point of view. Nevertheless, apart from the fact that the hookworm's nervous system does not entitle it to have a point of view, no biologists could bring themselves to refuse to apply the concepts of higher and lower organization to the animal world. Vertebrates just are in general of a higher organization than invertebrates, and mammals higher than other vertebrates, and human beings higher than other mammals. As for social affairs, the vast miseries caused by industrialization and modern warfare, the genocide perpetrated by the Nazis for example, or by the Americans in the Vietnam War, are indeed calculated to incline us to pessimistic conclusions; but you must remember the exceedingly short space of time during which our human civilization has existed, as compared with the time taken in biological evolution. Of a famous Edwardian statesman it was said that he approached politics with the air of one who knew that there had been an ice-age and that there would probably be another before long. I consider that he was unnecessarilz chilly. In the light of biology and sociology, those who remember that there were once only autotrophic bacteria in the world, and that there will some day be a cooperative commonwealth of humanity, are much better politicians.

Regnum Dei: Here But Not Yet, or Not Here But Now?

Now I think there is no doubt that for the Christian the nub of the matter is the doctrine of *Regnum Dei.* The theological aspect of this, it seems to me lies in the nature of our doctrine of the Kingdom of God. There have been four totally different conceptions of this. It has been thought to exist here and now, or here but not yet, or not here but already now, or not here and not yet. It seems to me that the most fundamental distinction lies between those who have looked for the Kingdom on earth, whether now or in the future, and those who have interpreted it as an essentially invisible and other-wordly state, i.e., between the second and third alternatives. The early Church, to the end of the 4th century in the West, seems to have been entirely devoted to the second idea: that the Kingdom would be here but not yet. It was believed that the second coming of the Lord, thought to be imminent, would inaugurate a visible reign of perfect righteousness, in which the saints would administer till the last judgement a society based on love and justice. This doctrine, millenniarism, chiliasm, or realistic eschatology, found its canonical authority largely in the Apocalypse. I always think it's a very impressive that the Apocalypse says of the Heavenly City that it isn't somewhere else, it doesn't stay in heaven, it actually comes down on to the earth. Cyprian, Justin, Irenaeus, and Tertullian all agreed with this point of view. But there were other factors. There was the necessity of adopting a prophetic vision of a world made new to a world in which the expected leader did not return. There was also the influence of Hellenistic mysticism and allegory which, with people like Origen and other Neo-Platonists, tended to emphasize the interpretation

of the Kingdom as an entirely mystical thing, existing now but elsewhere, wholly in the world of the spirit, never to be visible. Then again there was the increasing organization of the Church and its acceptance by the secular power in the time of Constantine. This naturally invited men to diminish their ideals of love and justice and to identify the Kingdom with an actually existing society. So that the Kingdom was thought of as here and now, the Eastern empire perhaps, or, later on, the Latin Church. And in all ages of Christianity there have been supporters of the fourth and most remote interpretation: namely, that the Kingdom means only the reign of God after the last judgment.

Contrasts and Similarities in Hebrew and Chinese Thought

I suppose the millenniarist viewpoint was really a continuation of the great strain of Hebrew prophecy with which all the actors in the drama of the Gospels were certainly familiar. I always think it is extremely impressive how in the Hebrew prophets the God of righteousness and justice is a God of the living and not of the dead. It wasn't until perhaps the early 2nd century B.C. that the idea of paradise or hell came in to Israel; before that there was only She'ol, the Yellow Springs as we say in China, the *huang chhüan,*chhüan, to which everybody descended, that kind of grey powerless Hades where nothing good could be accomplished any more. In other words, justice and righteousness in the prophetic tradition were for here and now. It is very interesting to find following upon this the apocalyptic conviction that evil would be overthrown and the earth become "a common treasury of right-loving people", as Gerrard Winstanley said. This contrasts vividly with the characteristically Indian and Hellenistic belief in a former Golden Age from which humanity has for ever fallen away. The only other Asian literature which seems to me to resemble that of the Hebrew prophetic tradition in this way, is that of the Chinese. In the *I Ching* (the Book of Changes), which goes back at least to the 5th century B.C., you have remarkable descriptions of social evolution. Then you have the great conceptions of *Ta Thung,* the Great Togetherness, connected with the Taoists and Mohists (4th and 3rd centuries B.C.); and also the conception of *Thai Phing,* the Great Peace and Equality, which has other ancient roots but became very important in the last century with *Thai Phing Thien Kuo,* the "Heavenly Kingdom of Great Peace and Equality", a quasi-socialist quasi-Christian populist rebellion against the imperial Manchu dynasty. *Ta Thung* goes far back into history, and *Thai Phing* also, both were regarded as states of human society to come, when evil would be done away with and justice, righteousness and comradeship would reign.

In connection with these conceptions you sometimes get the same sort of problems as in the West, and one of these is the idea of inevitability. To what extent can we suppose that this realm of justice and righteousness will come in the future if we simply sit back, pray for it, hope for it, but don't actually do anything? We know that this interpretation has raised great intellectual excitement, especially in the realm of Marxist ideas; But I think those writers have perhaps spoken of inevitability in a similar way to that of some of the Chinese writers, because they were confident that they understood the nature of human beings and their reactions to external conditions. They said that this realm will be what will come about on the face of the earth when men follow their best impulses and their real fundamental wishes, and realize what will really make them happy and what will not. Their knowledge of good and evil, pleasure and pain, the simple, natural, healthy, human desires of the great mass of people for love, children, socially useful work, fundamental decency and dignity will inevitably have their ultimate effect. I suppose this is the meaning of the ancient Confucian advice to rulers in the book called the *Ta Hsüeh* (The Great Learning): *Min chih so hao, hao chih; min chih so ô, ô chic:* "Love what the people love and hate what the people hate, then you will be a really successful ruler."

So the time-scale is what remains obscure, though there is great significance in the word "temporary", e.g. temporary setbacks. Failures, and set-backs and blind alleys there have been, and there will be in plenty, but the ultimate victory is not in doubt. Yet although it is not in doubt, one must remember what each failure means. It may mean the enslavement of whole peoples for many generations. The imprisonment, torture or destruction of the best of the people in a particular society; the stagnation of the social process and progress in such regions; and indeed the martyrdom of many thousands of our best and noblest contemporaries and friends, and perhaps even our own. In the ancient phrase, the saints under the altar cry, "How long, O Lord, how long?" Therefore to speak of the inevitability of the higher integrative level of social ethic, *Ta Thung* and *Regnum Dei,* is not to say anything about when it will come; all we know is that we have to fight for it.

Chinese Socialism – the Work of God

May I go back now to the assertion made earlier on: that our society as we know it is not the highest form of order of which Nature is capable. I am moved to emphasize this so much because this past summer I had the interesting experience of living for a couple of months in a society which, to call a spade a spade, and not to put too fine a point on it, is, I think, further on the way to the true society of mankind, the Kingdom of God if you like, than our own. I am talking about the Chinese society of the present day. We don't know what back-slidings and failures will occur, but on the whole I think they are more advanced. I want to share this Chinese experience with you in the context of this general discussion of what I as a late 20th century Christian could mean by Christian hope. I have to say a few words first of all about the nature of Chinese society.

It tells you something that during my time there, as I saw and heard over and over again the wonderful things they are doing on all hands to attain a social order such as I could approve of with enthusiasm, the phrase kept coming into my mind, *Gesta Dei per Sinenses,* instead of the old *Gesta Dei per Francos* of the Crusades, which was mostly blood-thirsty. The Chinese are not like that at all, and a tremendous work is going on in that vast country of 800,000,000 people.

Of course it is a socialist society, it has central planning, but at the same time it is very democratic. There are all kinds of things you have to bear in mind about it, for instance, that it is in the midst of a national Renaissance, and very proud of having got away from its old semi-colonial status. Again, the Chinese have an expanding economy: great construction is going on in all fields – transport, medical services, education, whatever you like to look at – and this I have seen with my own eyes. I lived there through the second world war and I've been back in 1952, 1958, 1964 and now again in 1972. All the time there has been this continuous construction, which has not been interrupted by the Cultural Revolution during the past half-dozen years, in spite of the many upheavals and difficulties which this has entailed. One must imagine also complete social security, with great honour paid to manual work.

The Chinese have many problems but they are not ours: for example, there is no exploitation of sado-masochism or sex or violence for financial profit. They have no problem about violence on television, and no problem of youth alienation, since all the young people are enthusiastic about the job they are doing, even if it's being a peasant-farmer or a "bare-foot doctor" in the countryside. Simple people among simple people, but with humanistic values, and mastering more and more high technology. There is unquestionably great enthusiasm for the new society. You have to see to believe – you have to live in the midst of it. Among the older people there must be some who regret the privileges they had in the past, but among the young there may be 95% in favour of it; that is, they wouldn't dream of going back to anything else. Its base is very strong. How it has been possible to kindle this? How Chairman Mao has found it possible to inspire such a vast amount of humanity sometimes baffles me. But it's a charismatic thing which must mean a tremendous lot for humanity as a whole. Of course, I don't want to give the impression that everything is "wonderful" in China, because it's a hard place to live in. Undoubtedly there are very strong social pressures in China, but one has to remember that there were very strong pressures of conformism in the old society as well, where the family was so all-important. But you get these in many societies.

The basic meaning of the Chinese revolution can be understood only in the light of the fact that the system of capitalism did not develop spontaneously in China. There is I think, no more important fact than that. They had their own form of bureaucratic feudalism, which involved a non-hereditary élite. In the early socialist parties in China soon after the overthrow of the Manchu dynasty in 1911 and also in the early days of the Communist party in the early 20's, there were violent debates on whether China would have to go through all the stages of capitalism, or whether it would be possible to move straight to socialism. You can say that what happened in 1949 was really a decision, on the part of the Chinese people that they would not adopt capitalism at all, something totally foreign to Chinese culture, but would go straight to socialism, which again would be run by a non-hereditary élite, but one with totally different aims, ideals and objects, from those of the Mandarinate of the past.

Progress Toward the Classless Society

At the present time China is returning to an even keel after the Cultural Revolution. From personal observation I can report what I think its chief effect has been namely that the Chinese have made great stride towards the classless society. It seems to me that one of the main characteristics of the future world cooperative commonwealth of justice and comradeship is bound to be a classless society. The barriers of class between men and women are very great in all the old traditional bourgeois-democratic societies of the West, and they don't seem to have been very effectively

abolished the Eastern European People's Democracies either. But the Chinese are making what I can only call heroic efforts to get over them and to produce a really classless society. I think the heroism consists partly in the fact that they have further to go. Probably there is more of a gap in living and educational standards between the simplest peasant-farmers in China and the well-educated intellectuals or people of middle-class origin, than there is in any Western culture. For that reason what they are going through is all the more heroic.

May I put this in another way. China in 1949 accomplished the basic Marxist revolution of the nationalisation of the means of production. When I was young and studied Marxist classics, that was always visualized as the end (or rather the beginning) of everything. Yet nobody ever said anything about what would happen afterwards; it seemed as if it would be like the ushering in of a kind of millennium, and they didn't really think beyond that. Or at least the Marxists didn't; if you did you were written off as some kind of Fourierian or Saint-Simonian utopian socialist. But the Chinese have certainly done so, and, guided by the Chairman, they found that somehow or other the class-struggle would have to go on, perhaps for centuries, after that first revolution was accomplished. And this is a most extraordinary thing because it comes back to saying something that has been very familiar to us and to our forefathers in the Christian world for a long time. The point is that there can be a recrudescence of private interest. For example, take a young man of what they would consider "impeccable" origin, by which I mean poor-peasant, poorest-peasant origin. If he became the secretary of a commune, or an administrator in a factory, and then started to "feather his own nest", accumulating privileges and giving offhand unkind treatment to ordinary people, then he would become a "class enemy." They don't hesitate to use such phrases. Yet in a way this recrudescence of private interest, which is, according to the Chairman, likely to go on for so long, is incredibly like the "old Adam" which a lot of people in the West, brought up in the Christian tradition, have also understood would take a long time to eradicate.

Of course the Chinese have an optimistic view about the eradication. Not being Christians they don't put faith in liturgical prayer, sacraments and preaching. As descendants of Confucians and Mohists, they say that if you carry on with socialist education, education for morality and ethics in society, it will in the long run be possible to eradicate self-interest. But they're not too optimistic because they say there will have to be other cultural revolutions and upheavals of this kind from time to time for almost as far ahead as we can see. Nevertheless they have great slogans like *chan ssu, tou hsiu* which means "fight self-interest" (very extraordinary!) and repudiate privilege" (for oneself - most peculiar!) Or take this little button I am wearing in my lapel, a badge which a friend in Kunming gave me. If you could see it closely you would read as follows, *wei jen min fu wu,* which means "In everything you do, do it for others". Do it for "the people", or in their phraseology, for "class brothers and sisters". They said this, but of course they know perfectly well that in fact the whole world will be full of class brothers and sisters when there aren't any other classes, and nobody is exploiting, or grinding the faces of anybody else. So they have come to this belief that in order to work towards the classless society they must get rid of the separate existence of administrators, managers and members of the "learned professions" as such. That doesn't mean of course that there aren't going to be any more organizers or doctors or lawyers or scholars (I don't say anything about clergy – that I'll come to later); what they say is that they are going to be like ordinary people. In other words, they are out to get rid of that middle-class-ness which like working-class-ness itself does act as such a tremendous barrier between people, preventing friendships and real human intercourse. I might interject that one of the things I told my friends in China (they often tell me things they think I won't like to hear and I often tell them things which I think they won't like to hear) was that curiously enough one of the ways of bursting through these class barriers in the Western has precisely been the practice of organized religion. I know this from personal experience but it seems very strange to friends in China, because all the thinking ones are comparatively orthodox Marxists.

So it is the fusion of the entire people into one and it is very interesting because it works both ways. It isn't only getting secretaries-general who can use a lathe for two or three months in the year and know exactly how it feels to work on the shop floor; it isn't only getting scientists who can farm an acre or two if they have to, or sail a ship, or know how to run telegraph lines across the mountains; they also want to produce peasant-farmers and soldiers who can write reports or do agricultural research, or explain themselves to a meeting with perfect articulation and clarity. One of the most remarkable features in China today is the existence of the so-called 7th of May Cadre schools, which everybody is going to now; all organizers, administrators and professional men spend a year or so in these schools, actually living with the working people. It has been said that there are many soldiers, for example, who played a fine part in the revolutionary civil war and were not afraid of bombs and machine-guns but who the moment you ask them to write a report, tremble like an aspen leaf. They dare not get up in front of a meeting and say what they want to say. So they too are under training to melt into one, so everybody will really get together. Partly its a matter of dispelling fears – fear of getting one's hands dirty, fear of monotonous manual work, fear of philosophy and intellectual snobbery, fear of writing and speaking.

Of course there are many other watchwords in China which I've no time to talk about this evening. Take for example, "Putting politics in command." Translating this into my own language, I should say "Putting human values in command", not economic laws, nor yet technology as such, nor yet high cultural attainment as such, nor yet maximum efficiency in running things (if that's what you think it is). They believe that all these things are secondary: the first thing is to put human values in commands.

Let us now speak about the question of religion. Naturally I look at it from my point of view, while they have theirs. I should call all this work I spoke of just now – the *Gesta Dei per Sinenses* – God's work in China. What I find extremely disturbing is that it's all going on under the banner of an implacable hostility to organized religion. No doubt there is nothing new in this, and no doubt Dietrich Bonhoeffer would have understood it it quite well.

If I may diverge for a moment: this is mitigated by a very careful preservation of temples as historical museums and their gardens as recreational parks. This last summer I was myself in a number of Buddhist and Taoist temples, where everything down to the last hassock was preserved in the halls of worship, all the banners of victory, the Buddhist statues behind and above the altars, the incense-burners, the wood drums on which you beat time when you *nien ching,* when you chant the sutras – everything is preserved absolutely, not a touch wrong, and yet no worship is going on there. And the monks are often still living in those temples. I remember in one place there were 28 of them, still cultivating the temple lands as a production brigade. They had all agreed to laicise themselves, with their abbot, and half of them had married; whether or not they still had a private chapel in which they made their devotions I was too discreet to ask. In certain other temples, however, perhaps not many in number, the old monastic life is continuing unchanged.

You will naturally ask about the situation of the Christian churches. They are exceedingly weak. After all those centuries since the first Nestorians got to China in the 7th century A.D., out of 800,000,000 people not more than 3,000,000 could be counted as Christians in this present century. Some may regard this as a success, but I must say that I couldn't think so. What has happened to all of them is rather a puzzle; the Latin Church, for example, was quite strong in the Northwest, around Ninghsia, Hanchung and in Kansu, and yet is seems to have sunk without a trace. I don't believe in all the millions of deaths that, according to the newspapers, took place in the earlier stages of the revolution. I don't believe it because in all the times I have been back there since, the conditions and attitudes of my friends (and I have many friends there from the war-time years) have been much too relaxed to allow belief in any enormous number of people having been killed. Similarly, I don't believe that there has been any great number of Christian martyrs. I am much more inclined to think that many Christians have felt that their aims were being implemented by revolutionary Chinese communism and that they ought to join up with it. This is all the more striking in that "missionfield" Christianity seems to have been hardly affected at all by Christian socialism. In Shanghai I specially made enquiries, and I found that there are a few churches still open but attended only by aged people. The same is true of the mosques in Ninghsias: the young have entirely given up the practice of any organized religion.

And so one comes to the great paradox that, as I see it, in China they are implementing the second great commandment far better than has been done by Christendom at any period, while at the same time rejecting altogether the first one. The other day I turned up one of my favourite books, the *Preces Privatae* of Lancelot Andrews and my eye fell upon the catalogue of divine actions and attributes: "Opening the eyes of the blind, clothing the naked, upholding such as fall, gathering together the outcasts, giving food to the hungry, bringing down the haughty, delivering the captives, releasing the prisoners, lifting up those that are down, healing the sick, sustaining the living and quickening the dead, raising the lowly and helping in time of trouble". If you ask any ordinary person in China whether that is what the régime of Chairman Mao has done since 1949, he will say yes, that is exactly what it has done. I remember being tremendously impressed by what was written by a friend of mine, John Lewis, many years ago on Christianity and socialism. He referred to the fact that in the Apocalypse (Ch. 21) the earlier John wrote about the coming down to earth of the Holy City of God: "I saw no temple therein. For the Lord God, the Almighty, and the Lamb, are the temple thereof, and the city hath no need of sun, neither moon, to shine upon it, for the glory of the Lord doth lighten it, and the lamp thereof is the Lamb." If you belong to the people who have "loved the habitation of thy house" it is very disturbing that there is no temple in the heavenly city. Somebody else that I remember reading wrote: "When society has been sanctified itself by the full incorporation in it of the principles of justice, love and comradeship, religion is destined to pass without loss into social emotion as such. When oppression has been removed, when religion as the cry of the oppressed creature has ceased to exist, nevertheless the sense of the holy, the numinous, one of man's most fundamental forms of experience, will never disappear in that society of the future."

I don't know whether the numinous quality is right or not, but I was very much impressed by another thing in China this summer: the curiously liturgical, certainly numinous, aspects of the attitude of ordinary people to what is being done and to human relations. For example, on the public address system of the trains they normally play opera and other sorts of music, very good indeed and very enjoyable (and you can turn it off if you want to); but on leaving stations and before arriving you get a kind of litany. What it repeatedly says is *Mao Tsé-Tung chu-hsi chiao-cho wom-ên...* with quotations following one after another. "Chairman Mao Tsé-Tung teaches us" etc., etc. I couldn't help being reminded of the Orthodox liturgy: "Again and again in peace let us pray to the Lord." This was all the more appropriate since so much of what he says is about selfless service to others. If you take up the "Little Red Book", which is not nearly so much in evidence in China now as it used to be, the charismatic message can at once be felt. "Our point of departure", says Mao (p. 170), "is to serve the people whole-heartedly; never for a moment to divorce ourselves from the masses, and to proceed in all cases from the interests of the people, from their interests and not from our own self-interest, or from the interests of a small group; and to identify our responsibility to the people with our responsibility to the leading organs of the Party."

Related to this is the sense in which exaggerated things seem to come to life. For example, the President of the National Academy, Kuo Mo-Jo, one of the greatest archaeologists, poets, and playwrights in recent Chinese history, is reported to have said in the earlier phases of the Cultural Revolution, in that kind of autobiographical public confession that people in China are always being induced to give, that "all I have written isn't worth a single page of Chairman Mao's". People in the West thought this was the most appalling adulation, the most dreadful boot-licking, the personality-cult gone mad, and so on. Yet once one begins to understand that what Mao is all the time preaching is the right relations between human beings, it begins to seem quite fair, and if we had been in Kuo Mo-Jo's position we might well have said the same thing. It would be some kind of parallelism to say that everything we've written is nothing compared with the two great Commandments. One simply cannot compare one's own works with these basic things that matter so fundamentally to human life in community.

There were many other things which made me feel strongly that the numinous is by no means absent from the way the Chinese people think about their society and what they're doing to it, all in the light of their undoubted genius for ethics. One was a great painting of Yenan, very nicely done, with the pagoda on top of the hill, the bridge across the river below, and the little town nestling in the valley. And what did the inscription say? Only four characters, *ko ming shêng ti*. This is highly evocative, because *shêng ti* means holy ground or place of pilgrimage where one goes to find a *shêng jen*, a sage, the highest term you can apply the Master himself, Confucius. There is nothing above *shêng* which was used in Christian translations. I think the Anglican Church has this word in its title in Chinese, *Shêng Kung Hui*. So here Yenan was called *ko ming shêng ti*, the Holy Place of the Revolution.

I should also like to tell you about some of the talks I had with a number of people. One was with a friend who has a high position in the Foreign Affairs Department of the National Academy. He is a Muslim, or I should say an ex-Muslim, because although he was from Ninghsia, he was completely converted to Marxism and anti-religion. I asked him if there were any Moslems there who, like some of the Poles, for instance, are strong Christian socialists who fully agree with the policies of the People's Democracy but at the same time support the Church. He said definitely no, there are only the old people who follow the old way and the young who follow an entirely new way; there are very few indeed who bridge this gap. He himself was very interesting, for he told me that he had revolted against Islam chiefly because of the conception of *kismet* or *inshallah*, resignation to the will of God, the central doctrine of the faith. In relation to that I said to him that I thought it odd that he should feel that way because after all, in the days of the conquests in the 7th and 8th centuries, when the Muslims took over the whole or Egypt, North Africa, Spain, Persia and all the way up to the Chinese border, even into India, they certainly could not be said to have been sitting back supposing that they were resigning themselves to the will of God. They must have had some quite different conception of this: they may have thought of themselves as the sword in the hand of God or something like that, but they certainly weren't resigning themselves to anything. That had not occurred to him. I also took the liberty of quoting to him the famous phrase of another man I greatly admire, Cromwell, the Lord Protector of the Commonwealth. "Trust in God, my boys, **and** keep your powder dry." That also interested him. Then again there was a remarkable talk about religions I had with another friend, a scientist, who said, as of course they all say, "Remnants of feudal idealism". So I had to talk about metaphysics for a while, to show that we were not quite on the same wave-length. Then he said, "Religions are all vestiges of worn-out feudal systems and should be utterly destroyed", and, speaking in English used the curious expression, "All other sects beside Mao Tsé-Tung's thoughts are really poisonous weeds." I put my view about religion as one of the basic forms of human experience, but he naturally wouldn't accept it.

Reflections on the Marxist Critique of Religion

I must say that I never felt so forcefully as in these long discussions the strength of the Marxist case against organized religion. It is one thing, as a student among students, or if you like, as a don among students to have armchair discussions of the pros and cons of the Marxist criticism; but it is quite another to live and work in a society which is actually practising Christ's teaching in so many ways under the aegis of a highly conscientious atheism. The burden of what they were saying is really that belief in God and the practice of liturgical worship is not something neutral, but a positive barrier to actually **doing** something about the ills of humanity. That is the force of the case that has to be argued. I won't bring forward all the possible reasons why this point of view doesn't quite hold water. I don't think it was much use my repeating my conviction that religion is a particular form of experience analogous with aesthetic, scientific, historical and philosophical experience, something that is essential if he is to be a whole man, and therefore something that cannot easily be got rid of. What did have more effect, I think, was the point that in history religion has undoubtedly often been revolutionary. I have already mentioned the case of Islam in its formative phases, but you can also find abundant examples in Christendom such as the Donatists, and the Taborites, and the Hussites. One of my finest experiences in China was in 1952 when the Czech Army Ensemble came there. My colleagues and I went to the theatre, with Mao TsêTung himself sitting in the front row, and enjoyed what the Czechs sang – Hussite chorales, if you please – with great enthusiasm, and the Chairman applauded as much as anyone else. There was certainly revolutionary Christianity in the time of Jan Ziska and those others, to say nothing of Thomas Münzer, whose religion was far from counter-revolutionary. The "Agitators" or regimental delegates of the New Model Army were chosen to **do** things, and they did. I also said that there are many in Western societies who are prepared to act and to suffer for it, as in movements against the Vietnam war and many other things.

It was an absolute surprise to them to realize that there are strong movements in the Western world, which are devotedly agnostic or atheist, but at the same time liable to be quite reactionary politically.

I want lastly to raise the question of whether or not China – a people and a culture that I so greatly admire – could perhaps be a special case. On the one hand, I might say paradoxically that I think China is the only truly Christian country in the world in the present day, in spite of its absolute rejection of all religion. But, on the other hand, a case could perhaps also be made for the view that the Chinese have never been fundamentally gifted in the sphere of religion, as I think the Indians and Japanese have been. The phenomenon of Shintoism, for example, would be almost inconceivable in China, for it is the numinous "in pure culture" without theology, with little ethic, and almost no liturgy. It may well have Taoist roots, but it brought the mystical cult of emptiness to wonderful perfection. Thus I think that Christendom, Islam, and Indian and Japanese religion all participate in this sense of the numinous, while the Chinese are perhaps a bit lacking in it. That does not mean that there have not been great religious geniuses in Chinese history; there have been times when the Buddhists and Taoists produced the most extraordinary men. But by and large China has a fundamentally ethical culture, and the real uncrowned king of Chinese civilization, over all the millenia has been the Master, Khung fu tzu, with his basically ethical and moral teaching, and a morality not depending on supernatural sanctions. This last is a profoundly important point, and it may be that the Chinese, because of this freedom from supernatural sanctions, have an enormous amount to teach the rest of the world. If you go there today, you can really see the ethical character of their civilization. You come to feel that in a way the Cultural Revolution itself has been a kind of upsurge of Confucianism, not in its traditional ancient forms, with all the rules about the duty of prince and minister, husband and wife, younger and elder brother, but rather in its basic fundamental this-worldly ethical approach. The categorical imperative, springing from the essential nature of man himself, seems to me to be Confucianism in action, and it has never been more marked in Chinese history than in the present day.

Liturgical Worship: An Appendix to Christian Hope

In the end I want to come back to Christian hope. All I can tell you is what it means for me. I am quite prepared to stand up as a man of the late 20th century and go on record about the way I see it. Obviously it hasn't anything remotely to do with a heaven with harps, nor is it concerned with a hoped-for immediate second coming, or the apocalyptic attitude of the Christians of the first few centuries. As for I am concerned, it doesn't have to do either with "personal salvation" whatever that may mean. I quite see the beauty in the old ideas of that, the excitement and meaning that it had for many people, as expressed in those wonderful Latin hymns, like *O quanta qualia, sunt illa Sabbata.* I suppose there are some people in the Western world who are still inspired by it, though it does render Christianity susceptible to very crude attacks of the "pie in the sky" character. In any case I don't include much of that in my own

hopes. Personal immortality, no alas, as all my friends say, "We're not told very much about that in our sacred writings"; I have already indicated how much I admire the prophetic tradition in Israel with its God "of the living and not of the dead." How strange that Confucianism was so like that.

If I am to say something positive about what Christian hope means I would put it in three forms. First of all, the question of finding Christ, of finding the spirit of Jesus. The other day, I got a paper which had a somewhat arresting section sub-title, "Where is Christ to be found?" That set me thinking, and of course I said to myself, "In the eucharistic liturgy, if you accept this," but more fundamentally, I would suppose, "Where the good are, and where good things are done". Now there have been all sorts of good relationships between human beings and all contribute to bringing about the Kingdom of God on earth. That seems to me to be the first aspect of hopes to recognize, appreciate and help them wherever one finds them in the world. And that means appreciating what is happening in China at the present day.

Secondly, I would say hope for the coming of the Kingdom on earth. I have mentioned the "saints under the altar", and the time-factor, and inevitability and martyrdom, and all the rest. There are martyrs in our time, of course. I won't speak about the people in Vietnam, or in the political prisons of twenty countries, but just recall those six Nigerian nurses in the time of the Biafran war. Of course it was nothing, only 1 1/2 inches in the *Times,* but when everyone else left they stayed behind at that military hospital to look after the wounded, and they were all murdered in some way or another as soon as the other side came in. That is the kind of action that one should be on the look out for and venerate. It seems to my mind that Christians cannot fail to support all revolutions against the oppression of man by man, and work towards what another friend of mine has called, "Jesus' New Way of Life, fraternal, universal, international, based on love, compassion and generosity". The Nigerian nurses were practicing it.

And lastly as a sort of modest appendix to this outline of Christian hope, I would pray that liturgical worship in the great religions will always be able to continue. My ideal is a practical socialism and, in the end, communism, if you like, but nevertheless not one which is basically atheist and agnostic, and one which at any rate allows for the practice of liturgical worship in the temple. I quite see that in John the Theologian's new city, the Heavenly Jerusalem, there would not be any temple, because although it would be on earth, the values of love, justice, righteousness and comradeship would be wholly incarnate within it. God would need no special house. I quite see the marvellous insight in that writing, but nevertheless one hopes that for many centuries to come, whatever sort of human society there will be, it will be liturgically possible to practice the first great commandment alongside the second. The other day, I fell upon a remark of George Tyrrell: "Houting and Loisy are right; the Christianity of the future will consist of mysticism and love, and possibly the eucharist in its primitive form as the outward bond". That was a long time ago, but I don't really know that we have got much further. These, then, are the three great aspects of hope as they seem to one Christian, who might also claim to be an honorary Confucian-Taoist, in 1972.

V

REPORT FROM KUALA LUMPUR

THE SCIENTIFIC, TECHNOLOGICAL AND SOCIAL REVOLUTIONS IN ASIAN PERSPECTIVE

INTRODUCTION

Asian societies are in serious trouble in their development efforts and strategies. The experience of the last two decades has brought into question the goals and assumptions of development planning. Instead of increased social justice, self-reliance, economic growth and independence, it has increased dependence, widened economic disparities and accentuated polarities. These contradictions have not only negated developmental efforts but have also created a 'development weariness'. A number of assumptions made by the developing countries have been proved wrong by actual historical experience. Today there is a search for new models, new assumptions and new ideas which would strengthen the movement for social justice, political independence and self-reliance, and at the same time promote rapid economic growth.

I. NEW PERSPECTIVES ON DEVELOPMENT

One assumption of Asian development strategies was that poverty would be eliminated through high growth rate: if you take care of the GNP, this will take care of poverty.

It is now recognized that on the contrary poverty must be attacked directly by creating new political and social and economic structures so that the benefits of development accrue directly to the masses. There must be economic growth, but growth alone is not enough. Social development and social justice needs to be given priority. This requires a pattern of development which makes growth and social justice complementary to each other. Development should concentrate on those sectors of the economy which directly help the poor. Full employment through public works programmes for rural and urban masses is a powerful means of redistributing income in a poor society. One of the fundamental ways of bringing about social justice and self-reliance is to increase the productive capacity and saving potential of the masses. All this requires new political-economic structures.

Social justice has often been confused with social service and social welfare which has merely helped to institutionalize charity. Social justice necessitates a *radical* and *fundamental* change in the political, financial and economic relations existing in many Asian societies. However, we must ask whether reformism and a piecemeal approach to fundamental economic ills do not rather accentuate social injustice, poverty and unemployment.

II. THE PROBLEM OF POWER

A second major assumption was that we could achieve growth and development in Asia without seriously tackling the question of political and economic power structures. As a result, unsatisfactory political structures, political forms and patterns of international relations have been left intact.

The concern should have been to identify those organizations of power which impede social justice such as monopoly capital, feudalistic systems, institutionalized disparities and polarities, and feudal, bureaucratic, financial and military elites. When such power structures are obstacles to development there is a real possibility of struggle against them. The forms this struggle may take will depend on the objective situation in particular national contexts.

Christians are obliged to align themselves with those struggling for social and economic justice. But this struggle should not be equated with anarchy and violence. Revolution rightly understood means a change in the values and structures of society so that exploitation and injustice can be eradicated. Such fundamental change can take place through non-violent methods. Where the power structures of society are so rigid that they resist change there is danger or violent disorder.

The churches can make a positive contribution by lending support to the movements which encourage wider participation while opposing structures of domination and exploitation in both Church and society. This implies that the Church must begin by changing its own structures to engage more effectively in this effort. In some Asian situations strong centralized control may be essential for achieving major national goals. But these forms of control and coercion should always be applied for the purpose of achieving greater social and economic justice. Power should always be exercised in accordance with socially responsible objectives and priorities and should not be allowed to become an end in itself. Also, constant pressure should be exerted on the power holders to share the power of decision-making as widely as possible with those over whom the power is exercised.

III. CHALLENGING EXPLOITATION BY THE DEVELOPED NATIONS

The institutional framework and patterns of relationship that exist between the developed and the developing countries have strengthened the exploitative power of the rich and powerful nations. In addition to these inequalities there is now the new danger of a drain of non-renewable resources from the developing countries. And while a measure of economic growth has been fostered this is accompanied by patterns of production and consumption which are proving to be wasteful of human and natural resources. These relationships seem therefore to have created new forms of domination of the weak by the strong.

The burden of debt-repayment is another factor that is crippling developmental efforts of the Asian nations. Therefore these nations should give serious thought to declaring a moratorium on debt-repayments and enter into new arrangements for an orderly cancellation of 'foreign debts'. In case such negotiations fail to achieve constructive solutions the Asian societies may have no option but to freeze all debt repayments, regarding this as a legitimate reparation for past exploitation.

This should not be misunderstood as a rejection of international cooperation. On the contrary it may be the only way to provide a firm basis for real partnership in international economic relations. Experience has shown that certain types of bilateral aid and aid with political strings attached tend to negate the positive contribution of development assistance. Multilateral and certain other forms of aid given in the interest of the recipient economies can play an important role in sustaining and accelerating developmental efforts. But this requires substantial changes in the prevailing framework of international economic relations.

The Asian strategy in the interest of self-reliance and achieving social justice should be positive and not simply negative. Asian nations must enter into immediate negotiations with each other in order to strengthen their bargaining powers and to fight for just relationships with the rich nations. The countries of Asia must realize that their political weaknesses, internal quarreling and disputes only encourage the forces of domination and exploitation. They must jointly plan and create patterns of cooperation and institutional frameworks to make a frontal attack on mass poverty through self-reliance, radical change in their internal structures and mutual cooperation among themselves. This will include developing new rational patterns of consumption based on meeting the necessities of people. They should also change the patterns of trade with the rich nations which are weighted heavily against them. It can be done best by promoting greater trade among themselves, the creation of a common Asian currency or a Payment Union to remove their dependence upon the dollar or sterling, or other currencies controlled by the powerful nations. Where foreign capital infringes upon the rights and interests of the Asian nations it should be banned.

In order to strengthen their credentials and power to fight for international economic justice, the Asian nations must end internal exploitation of the poor by the rich by equitable distributive policies. The opposition to private monopoly capital inside will lend credibility to our fight against exploitation by monopolistic foreign capital or powerful multinational corporations.

IV. CURBING THE WASTE OF THE ARMS RACE

Any movement towards development and self-reliance requires peace and mutual confidence among Asian nations. We can ill afford the tragic waste of our meagre resources on a mini-armaments race and modern weaponry. It is absolutely essential to develop mutual confidence and a climate of peace as a necessary condition for development and self-reliance. This will also help to ensure that Asian nations no longer serve as proxies in conflicts between the great powers who often seek to use Asian soil as an area of military competition and confrontation.

The people of each country in Asia should be free to develop their society on the basis of their own chosen ideologies consistent with their unique historical and cultural experiences, without external imposition or manipulation. This will greatly strengthen our ability to withstand ideological attacks from outside, promote common human values, and develop a self-confidence consistent with our international responsibility.

V. DEVELOPMENT, ENVIRONMENT AND THE QUALITY OF LIFE

Mismanagement of the abundance of goods as well as poverty and insufficiency of resources can lead to the dehumanization of man. While Asian nations seek to increase the quantity of goods and services to save their peoples from the dehumanization caused by poverty, they also must give attention to the environmental and spiritual issues posed by material development. We need environmental policies to guide us in the wise use of our natural resources and a concept of the quality of life as one of the criteria by which to measure our economic development.

This will also involve new attitudes and policies concerning the use of technology for the exploitation of the natural resources. It may mean the rejection of the Western style use of technology with affluence as its primary goal. The Asian nations have to select and adopt a technology consistent with or appropriate to their concept of the quality of life – a 'technology with a human face' – and directed to socially desirable ends. Technology has a role to play in freeing man from the tyranny and capriciousness of nature, but it can also become the means to a new slavery unless it is kept under the spiritual discipline of the human.

Asian peoples also need to work out a new understanding of the relationship between man and the natural environment. Man should not be considered only as a consumer but also as a steward of God's material creation and as responsible for the use, conservation and replenishment of the natural environment. Moreover, the possibility that some resources will be exhausted obliges us to adopt consumption patterns which take into account the needs of future generations.

VI. RELEVANT TECHNOLOGY

Technological development is imperative for Asia. Whether the Asian peoples will survive or perish depends upon their willingness to adapt to modern technology and on their ability to undertake the scientific research on which it depends. The demand of the Asian peoples for higher standards of living, and for freedom from hunger and disease means that they must take every advantage of the new possibilities which technology offers.

Science and technology are not new to Asian cultures. But the coming of modern highly organized scientific-technological deployment must include some understanding of the points of conflict and the tension which will be created for individuals and groups.

Four issues have been considered by our conference to illustrate the ethical and spiritual problems of making the most constructive use of modern science and technology in Asian society.

1. Are Science and Technology Neutral or Not ?

Many scientists think that science and technology are neutral in relation to social goals. However, from the ethical, sociological or theological view points this is not so apparent. The scientific enterprise is not necessarily value free and is to be judged by its impact on human beings.

Technology has often had serious consequences for society. For example, in Japan, the classical framework of society has been substantially altered by the advance of technology. Entirely new patterns of family life have evolved. Science and technology have also had serious effects upon cultural values, personal ethics and religious outlooks.

There are also dangerous uses of science and technology such as the possible creation of biological or nuclear weapons.

Thus ethically 'neutral' science and technology appear in fact as filled both with potentially good or bad possibilities.

2. Technology and Pollution

The problem is how to measure the human and social costs and the benefits of technology. This can be seen clearly in contrasting the advantages with the burdens technology has imposed on natural resources and the environmental pollution caused. We still know too little about the overall effects of technology and the costs it imposes on present and future generations, to judge its safety in the short and the long run.

A great range of corrective measures must be taken to deal with the accumulated ecological burdens. It is also essential to establish safety devices as a safeguard against unforeseen ecological disaster arising from the indiscriminate use of scarce resources to meet the demands of rapid economic growth through new technology. This represents one of the most disturbing elements in the present yearning for more and more goods and services by the developed countries combined with the struggle against poverty in the developing countries. It is therefore important to see the global implications of problems of pollution and the exhaustion of resources. As the controllers and the users of modern technology, using up a constantly increasing quantum of resources, the developed nations have the greater responsibility for remedial action through a responsible use of technology. Part of this responsibility is to share with the Asian nations pollution-free technology. Many developing countries are forced to use polluting technology because they are unable to meet the cost of pollution-free substitutes, e.g. they are forced to continue the use of DDT to eradicate malaria despite its known harmful effects because they cannot afford to substitute a safer insecticide. In such a situation it would be in order for the developed nations to take a global view of the problem and provide the difference in cost for such a substitution.

3. The Challenge of the Technologically "Under-Developed", to the Technologically Developed

It is intolerable that the highly developed countries should continue to treat as lightly as they do the struggles of the technologically developing countries to acquire and use new technological skills. World peace and indeed the survival of mankind depends on finding a way of closing what is now a widening chasm between the developed and the developing nations. But the nations have still to agree on the principles by which an equilibrium of mutual concern and responsibility can be achieved.

The developing nations, with justice, are demanding access to the technological knowledge and skills of the developed nations since the growing wealth of the latter has been acquired by exploiting the resources of the developing nations.

Today many developed societies display the symptoms of 'over-development'. Society becomes overdeveloped not only when it destroys its environment and too rapidly exhausts the natural resources of the whole world, but when it is enslaved by materialism. An overly affluent society which does not toil or which reaps where it does not sow, begins to lose a sense of purpose in life. The symptoms of this in the affluent nations are all too apparent: boredom, the use of drugs, the increase of mental disturbances, etc. It may be the calling of the developing nations to help the developed nations to understand the causes of their spiritual confusion and together with them to discover the values which will enable technologically organized societies to remain human.

4. Foreign Control of Technology and the Need to Mobilize Indigenous Talent and Experience

Technological systems have developed within a wide range of political, cultural and ideological structures. Technology should be freed of such alien influences before it is introduced into other societies. This remains one of the biggest problems facing developing countries.

They are often forced to take much ideological or cultural baggage along with the much needed scientific and technological knowhow. The resistance to some forms of technology is often related to this fact.

Each Asian country has begun to develop a network of institutes and centres for the advancement of science and technology. These programmes need to concentrate on the urgent problems facing the masses. This implies greater use of local resources and experiences, leading to new insights into traditional methods of farming, medicine, etc.

Science should be made known and popular to the masses. For example, a popular programme of science education is a necessity. Scientists and engineers should make use of the mass media (newspapers, magazines, radio-television) to make science and technology more familiar; to show what science and technology can contribute to Asian development, and to guard against its negative consequences. This would help counter the tendency in some situations to consider science and technology as something alien and mysterious. The churches could make a useful contribution in this area.

5. Principles or Criteria of Relevant Technology

Relevant technology is the discriminate application of scientific and technological knowledge to the solution of the relevant problems of a particular area. There must also be a moral concern for its implications and consequences for others. The scientific and engineering knowledge used could be the most basic or the most advanced or new knowledge developed in a particular context for a particular purpose.

Some criteria for determining relevant technology in Asias:

- The technology should contribute to the solving of the major problems of Asia: mass poverty, over-population, under-nourishment and ill health, unemployment and illiteracy.
- The technology should encourage the optimum use of indigenous resources.
- Where – Where technological change involves the disruption of local traditions and values, it should be a criterion of relevant technology to assure a smooth transition from the old to the new.

VII. TECHNOLOGY AND UNEMPLOYMENT

The problem of unemployment in Asian countries is staggering and poses a threat to society unless measures are adopted to combat it. The adoption of a relevant technology to solve this problem in the Asian context requires that the nature and causes of unemployment are understood fully.

The extent of unemployment in Asian societies is magnified when disguised unemployment or under-employment is taken into account. The labour market is also being flooded by new entrants. Marginal farmers, small-scale producers, artisans, etc., who cannot face the competition of large-scale industries account for this trend. Asian countries also face a peculiar problem of unemployment amongst the educated class of people. Engineering graduates, trained technicians, specialists in the sciences and graduates in general cannot be absorbed into the economy. And yet these economies also face shortages of the right type of skilled and trained personnel. The pressure of population growth in these economies has, of course, become proverbial.

A discriminate use of technology would therefore require that the plans for economic and technological development be employment oriented. Labour intensive methods should be used as far as possible, coupled with use of local resources. The concentration of industries needs to be discouraged and dispersion of industries encouraged. This could be achieved by introducing special concessions and incentives for industries willing to move into rural areas, while guarding against the exploitation of rural labor and the wasteful use of natural resources and the environment. Small-scale producers should be enabled to adopt improved technology and where necessary protection should be granted to them.

VIII. THE EDUCATIONAL SYSTEM AND TECHNOLOGICAL DEVELOPMENT

The educational system in most under-developed economies is archaic and often a colonial legacy impeding national development. Its transformation should be a priority on the agenda for development. Measures to make education relevant to the demands of technological change are being pressed hard.

While general education is important in developing proper perspectives and personality, it should also aim at equipping students with relevant skills and knowledge. Western oriented education including technical education tends to alienate students from the rural areas resulting in a 'brain drain' towards urban centres.

The mass of educated elite also alienate themselves from involvement in the struggle for a more humane and just society. Education has robbed them of their indigenous identity and meaningful purpose in life and given them foreign values and life styles. The lack of properly equipped personnel in rural areas thus becomes a major obstacle to introducing innovations in the rural sector. It is therefore essential that the training of such personnel should be rural oriented. Inventiveness, ingenuity, ability to identify problems and search for solutions, ability to work under unfavourable conditions and with available resources should be emphasized in such training programmes. A sympathetic attitude towards the people and their problems should be developed by introducing social science courses in the engineering, medical and other professional faculties.

The high rate of illiteracy in Asia calls for unconventional and innovative ways of providing education for the millions of people who have been deprived of the opportunity of going to school. New educational technology, such as use of educational television, radio or other forms of mass media could help solve the problem of educating the masses. This is not only with the purpose of eliminating illiteracy but also with the view to raising the standard of education of the people so that they would be better equipped to live in the age of technological change. Adult education or continuing education can play an important educational role in developing economies.

Technological change while offering opportunities for a better life for the people also poses a threat to their security and social harmony. It is therefore imperative to put adequate social controls on the economy to ensure that the welfare of the maximum number is served. Measures such as land reform, ceiling on holdings and urban wealth and incomes should ensure a just distribution of resources. Without supporting social legislation technological development will inevitably widen the gap between the rich and the poor and lead to a concentration of wealth and power in the hands of the few. All measures to solve the problem of poverty and unemployment will thus be frustrated.

IX. IMPACT OF TECHNOLOGY ON ASIAN WOMEN'S ROLE

Modern technology can help emancipate women from household drudgery and enable them to live a richer and fuller life with dignity. It can also provide them with new opportunities to serve society by imparting special knowledge in public health, child care, nutrition and family planning.

In short, in Asia, technology opens up opportunities for the emancipation of women and for the raising of their status. Such liberating possibilities can be realized by the masses of women only when they have equal opportunities with men for higher income, full participation in social decision-making, leadership positions, etc.

X. POPULATION GROWTH AND UNEMPLOYMENT

The problem of poverty and unemployment will defy solution until developing countries severely limit the growth of their populations. While recognizing the fact that population control is a global problem and is complex and controversial in nature, developing economies can least affort to neglect it lest all efforts at improving the life of the people be nullified.

XI. CONCLUSIONS AND TASKS FOR THE ASIAN CHURCHES

Some sectors of Asian societies despite the many social problems, the famine which prevails in many areas and the great need of many peoples, are growing economically and industrially. As their economic development proceeds, aided by modern science and technology, and as the the frustrations of marginal sectors continue to mount, the question is posed, what are to be the objectives of these societies?

Every society should be concerned about:

- A just and responsible society. That means a society free from domination of one social group or class by another, and where there is participation by all in the decision-making process. It means developing a society based on a system of just law.
- The quality of life. That means a society which does not become enslaved to material goods and technological gimmicks or power, but which is built on (i) respect for human personality; (ii) respect for the claims of future generations on material resources and environment; and (iii) the development of a cultural and social heritage which can be passed along as a contribution to the welfare of future generations.
- Community. That means a society in which there is fair play for all regardless of race, sex or creed and where there is trust and confidence between peoples.
- The spiritual basis of man's existence. That means living in a full awareness of the biblical truth that it will not profit a man to gain the whole (technological) world if in the process he loses his own soul. It means opposing the many powerful disintegrating spiritual forces at work in the midst of technological and economic change.

Our deliberations at the conference prompt us to suggest certain directions for study and action by the churches and Christian groups in Asia:

1. We feel the urgent necessity to search for an Asian theology of man and society, nature and technology as the basis for a new Christian approach to economic and social goals. This is required by the debate about environment, resources, population and the qualitative approach to development. It is also required by the continuing search for clarity about ideology. This study should have at least two dimensions: a) a critical examination of the technological mind and its tendency toward a triumphalist view of the future; b) the criteria which would help define the quality of human life, seen in relation to the harmony of man and nature, and its practical expression in new patterns of human living; c) the movement towards socialist patterns of society and the still unresolved problem of how to relate this to the religious and cultural ethos of a people.

2. We strongly urge the WCC and EACC to make a study of the present position of foreign debt resulting from aid, trade and private investment in the Asian nations and to make the information available to the member churches and action groups for use in creating public awareness on this question.

3. The Conference recommends that the churches encourage programmes which would help people come to a better understanding of the causes of poverty and exploitation, both internal and external, and act more effectively to help the powerless to protect their interests and halt their exploitation.

4. The churches should recognize their responsibility to provide examples of simpler patterns of consumption in their own institutional life. The churches also have the responsibility to experiment and invest in new 'appropriate' types of technology which could serve as examples for communities seeking simpler consumption patterns.

5. One important task of the church should be to maintain communication with policy-makers so as to share with them the concern for promoting socially desirable goals of development.

6. We submit this report to the World Council's Working Group on Church and Society and to the Commission on the Churches' Participation in Development as a contribution to their on-going programmes on the future of man and society and on economic and social development.

We request the EACC Assembly in Singapore to receive this report, to give its comments and reactions, and to plan for continuing reflection and action on the theme of this Conference.

We invite the churches of Asia to consider their responsibilities on these questions and to widen their concern through the exchange of information and through further interdisciplinary meetings between Asian scientists, technologists, social and behavioural scientists, politicians, trade union and peasant leaders, social workers, and other laymen as well as theologians and religious leaders.